

AMERICAN

25c

\$3.00 YEARLY IN U.S.

Cinematographer

THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY



THIS ISSUE . . .

- A New Mobile Generator Unit
- Composition In Cine Photography

**FEBRUARY
1950**



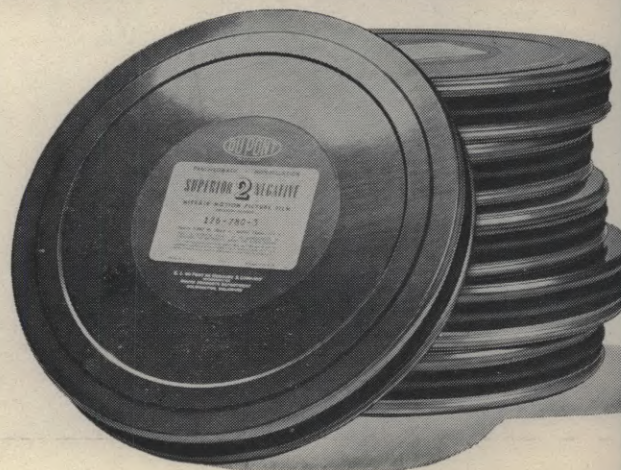
DU PONT "SUPERIOR" 2 is an all-purpose negative rawstock that readily meets the requirements of leading cinematographers. It has extremely wide latitude and ample speed for correct exposures under adverse con-

ditions of high- or low-key lighting. Approved for its uniformity of quality. E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware. New York—Los Angeles—Chicago

DU PONT MOTION PICTURE FILM



BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY



NOW! The Widely-Preferred COOKE SPEED PANCHRO LENSES

Calibrated in T STOPS



Matched for Perfection

Think what this means! Lenses *accurately* calibrated by scientific measurement of light *actually transmitted*! Consistent negative densities regardless of which lens is used! All that, *plus* these great previous advantages of Cooke Speed Panchro Lenses:

1. The greatest aperture in a complete series of matched lenses.
2. Chromatically corrected specifically for today's emulsions, color and monochrome.
3. Needle-sharp definition.
4. Superior contrast.
5. Elimination of distortion.
6. Cleanable hard coating on all lens surfaces.

Cooke Speed Panchro Lenses now in use can be re-calibrated in T Stops at the B&H factory. Write for details.

A Complete Series of Matched Lenses

25mm T2.3 (F2)
28mm T2.3 (F2)
32mm T2.3 (F2)
35mm T2.3 (F2)
40mm T2.3 (F2)
50mm T2.3 (F2)
75mm T2.3 (F2)
100mm T3.0 (F2.5)

Also 8½", 12½", and 20"
Cooke Telekinics

A Matched Set of T Stop Lenses for 16mm Cameras, Too

Carrying forward its program of pioneering the T Stop system, Bell & Howell now offers a group of popular 16mm camera lenses scientifically calibrated in T Stops. They are: 0.7" T2.7 (F2.5) B&H Super Comat, 1" T2.1 (F1.9) B&H Lumax, 2" T1.6 (F1.4) TH Ivotal, 3" T4.6 (F4) TH Telekinic, and 4" T5.1 (F4.5) TH Telekinic. In better photo shops now, or write for details.



Bell & Howell Company, 7148 McCormick Road, Chicago 45. Branches in New York, Hollywood, and Washington, D. C.

Precision-Made by

Bell & Howell

Since 1907 the Largest Manufacturer of Professional Motion Picture Equipment for Hollywood and the World

AMERICAN Cinematographer

THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

ARTHUR E. GAVIN, *Editor*

Technical Editor, EMERY HUSE

GLENN R. KERSHNER, *Art Editor*

Circulation, MARGUERITE DUERR

EDITORIAL ADVISORY BOARD: Fred W. Jackman, A.S.C., John Arnold, A.S.C. Arthur Edeson, A.S.C., Lee Garmes, A.S.C., Charles Rosher, A.S.C., Leon Shamroy, A.S.C., Fred Gage, A.S.C., Dr. J. S. Watson, A.S.C., Dr. L. A. Jones, A.S.C., Dr. C. E. K. Mees, A.S.C., Dr. V. B. Sease, A.S.C., Col. Nathan Levinson.

Editorial and Business Office: 1782 N. Orange Dr., Hollywood 28, Calif.
Telephone: GRanite 2135

VOL. 31

FEBRUARY • 1950

NO. 2

CONTENTS

ARTICLES

FILMING A TRIP TO THE MOON — <i>By Leigh Allen</i>	46
PRODUCING FILMS FOR TELEVISION	47
TOUGH ASSIGNMENT — <i>By Vincent Farrar, A.S.C.</i>	48
DISNEY ENGINEERS UNVEIL NEW MOBILE GENERATOR SET — <i>By Ralph Lawton</i>	49
FROM STILL PHOTOGRAPHY TO CINEMATOGRAPHY — <i>By Frederick Foster</i>	50

16MM. AND 8MM. CINEMATOGRAPHY

HOW TO GET GOOD COMPOSITION IN CINE PHOTOGRAPHY — <i>By Charles Loring</i>	52
FILMING WILD BIRDS IN 16MM. COLOR — <i>By F. C. Moultrie</i>	54

FEATURES

HOLLYWOOD BULLETIN BOARD	42
CURRENT ASSIGNMENTS OF A.S.C. MEMBERS	68
WHAT'S NEW IN EQUIPMENT, ACCESSORIES, SERVICE	69

ON THE COVER

LIONEL "CURLY" LINDON, A.S.C., lines up a shot on the "moon" set for "Destination Moon," George Pal production filmed at General Service Studio. One of the most exacting and realistic sets ever built in Hollywood, it afforded director of photography Lindon opportunity to express his cinematic individuality. The story of this interesting filming assignment begins on page 46 of this issue.—*Photo by Madison Lacey.*

AMERICAN CINEMATographer, established 1920, is published monthly by the A. S. C. Agency, Inc., 1782 N. Orange Dr., Hollywood 28, Calif. Entered as second class matter Nov. 18, 1937, at the postoffice at Los Angeles, Calif., under act of March 3, 1879. SUBSCRIPTIONS: United States and Pan-American Union, \$3.00 per year; Canada, \$3.00 per year; Foreign, \$4.00. Single copies, 25 cents; back numbers, 30 cents; foreign single copies, 35 cents; back numbers, 40 cents. Advertising rates on application. Copyright 1950 by A. S. C. Agency, Inc. AUSTRALIAN REPRESENTATIVE: McGill's, 179 Elizabeth St., Melbourne.



AMERICAN SOCIETY OF CINEMATOPHAGERS

FOUNDED January 8, 1919, The American Society of Cinematographers is composed of the leading directors of photography in the Hollywood motion picture studios. Its membership also includes non-resident cinematographers and cinematographers in foreign lands. Membership is by invitation only.

The Society meets regularly once a month at its clubhouse at 1782 North Orange Drive, in the heart of Hollywood. On November 1, 1920, the Society established its monthly publication "American Cinematographer" which it continues to sponsor and which is now circulated in 62 countries throughout the world.

Dominant aims of the Society are to bring into close confederation and cooperation all leaders in the cinematographic art and science and to strive for pre-eminence in artistic perfection and scientific knowledge of the art.

OFFICERS AND BOARD OF GOVERNORS

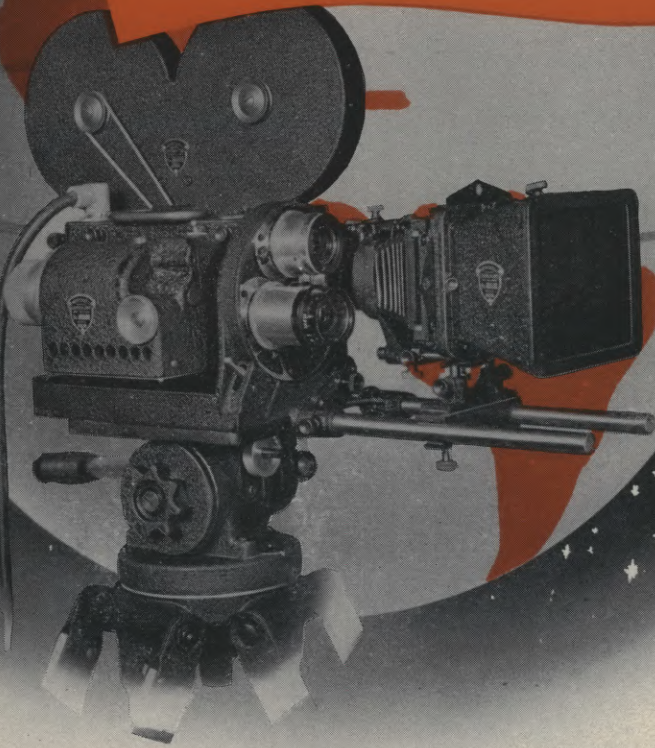
CHARLES G. CLARKE, President
FRED W. JACKMAN, Exec. V-Pres. and Treas.
ARTHUR EDESON, First Vice-President
GEORGE J. FOLSEY, JR., Second Vice-Pres.
WILLIAM V. SKALL, Third Vice-President
RAY RENNAHAN, Secretary
JOHN W. BOYLE, Sergeant-at-Arms
VICTOR MILNER
SOL POLITO
ALFRED GILKS
CHARLES ROSHER
LEE GARMES
JOHN SEITZ
LEON SHAMROY
JOSEPH WALKER

ALTERNATE BOARD MEMBERS

JOHN ARNOLD
SOL HALPRIN
ARTHUR MILLER
HAL MOHR
JOSEPH RUTTENBERG



Mitchell * known 'round the world
proven 'round the world



world's toughest picture problems invited!

Today, the famous Mitchell 16mm and 35mm Cameras are being used in increasing numbers in every part of the world. Pioneered by Mitchell, masterful engineering and quality workmanship has produced these flawless, precision-built motion picture cameras.

Every sturdy, proven Mitchell part . . . and versatile accessory . . . is adjustable to the most extreme and difficult photographic conditions the world over.



MITCHELL 16mm and
35mm PROJECTORS



Mitchell Camera CORPORATION

666 WEST HARVARD STREET • GLENDALE 4, CALIFORNIA • CABLE ADDRESS: "MITCAMCO"

EASTERN REPRESENTATIVE: THEODORE ALTMAN • 521 FIFTH AVENUE • NEW YORK CITY 17 • MURRAY HILL 2-7038

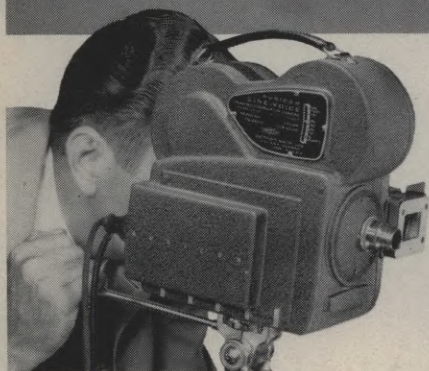


85% of the motion pictures shown in theatres throughout the world are filmed with a Mitchell

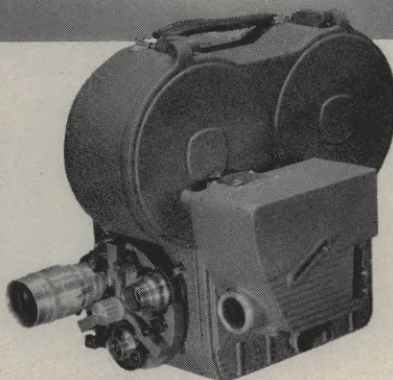
Auricon

**16mm
Sound-On-Film**

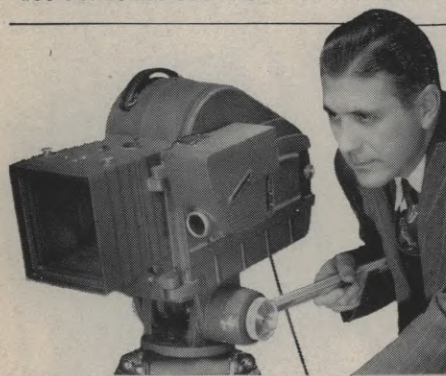
QUALITY EQUIPMENT — SENSIBLE COST



AURICON "Cine-Voice" CAMERA
100 FT. 16mm Sound-On-Film . . . \$695⁰⁰



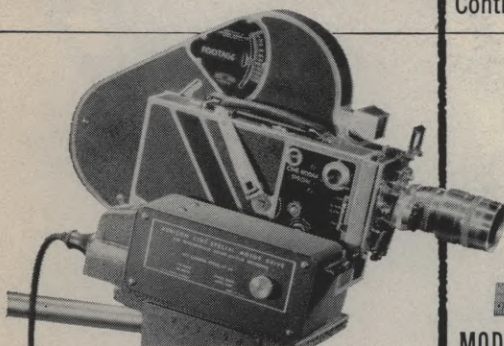
"AURICON-PRO" CAMERA
200 FT. 16mm Sound-On-Film . . \$1191⁰⁰



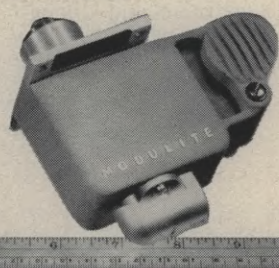
AURICON BLIMP (Sound-Proof Enclosure)
for E.K.Cine-Special 16mm Camera \$354⁰⁰



"AURICON 1200" CAMERA
1200 FT. 16mm Sound for 33 minutes
Continuous Recording \$2860⁰⁰



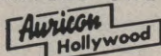
AURICON Synchronous Motor Drive
for E.K.Cine-Special 16mm Camera \$145⁰⁰



**MODULITE Sound-On-Film Recording
GALVANOMETER**
Variable Area or Variable Density \$450⁰⁰

Write today for YOUR free Catalog fully describing this AURICON Equipment in detail, plus Dual Phono-Turntable, Tripod, and other Sound-On-Film Equipment.

GUARANTEED ONE YEAR



RCA LICENSED

BERNDT-BACH, Inc.

7381 Beverly Blvd., Los Angeles 36, Calif.

MANUFACTURERS OF SOUND-ON-FILM RECORDING EQUIPMENT SINCE 1931

HOLLYWOOD BULLETIN BOARD

JACK CARDIFF, A.S.C., after a hectic two years shooting in Europe, is resting at Montana Hall, Montana, Switzerland. Cardiff's busy two years embraced the filming of "Scott of the Antarctic," "Under Capricorn," and his most recent assignment, "Black Rose," starring Tyrone Power.

WILLIAM SNYDER, A.S.C., has left his home lot, Columbia Pictures, temporarily to direct the photography of "The Toast Of New Orleans," at M-G-M. Snyder is a nominee for a photographic "Oscar" this year for his filming of "Jolson Sings Again."

SOL POLITO, A.S.C., victim of a freak auto accident early last month, is expected to leave St. Vincent's Hospital, Los Angeles, about February 5th.

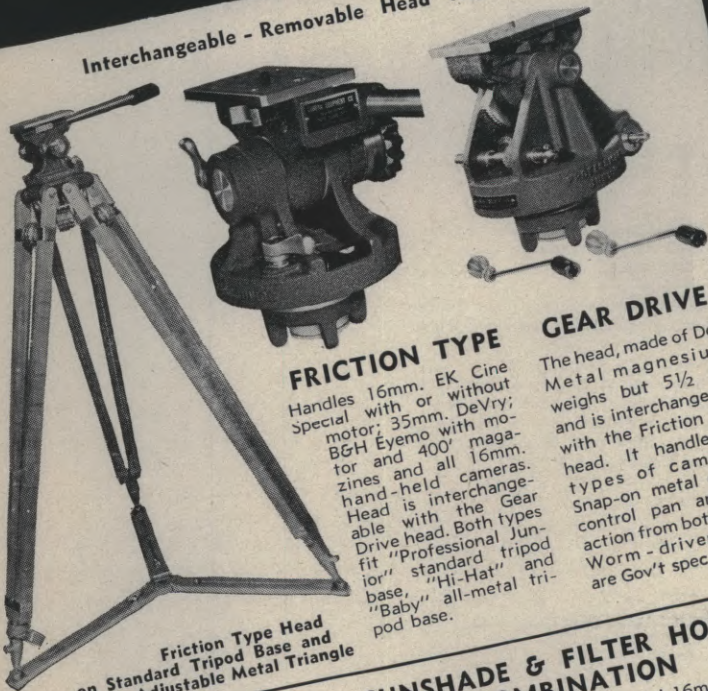
HARRY JACKSON, A.S.C., whose long list of cinematographic credits at 20th Century-Fox has culminated in a nomination for an Academy Award for the photography of "Oh, You Beautiful Doll!" has moved over to M-G-M to film the Technicolor production, "Three Little Words," starring Fred Astaire, Vera Ellen and Red Skelton.

A.S.C. MEMBERS were given a preview of the new, recently-announced Eastman Kodak neg-pos color film, when a demonstrator reel was screened at the last meeting of the Society in Hollywood. Emery Huse, A.S.C., who made a brief talk preceding the screening, advised that the film was merely a sort of progress report, and that the product would not be commercially available for probably a year. The reel comprised scenes photographed by cameramen at 20th Century-Fox, Cinecolor, and Columbia Pictures, and while there was detectable differences in the colors of each group shots, the new color system as a whole carries much promise, both for color rendition and the fact that the studios will be able to process it and make their own release prints.

METRO-GOLDWYN-MAYER last month announced it had completed a series of exhaustive tests on the use of Ansco Color for its productions, and would proceed with its use in a number of that studio's short subjects scheduled for 1950. According to John Arnold, A.S.C., M-G-M camera department head, initial subject will be a musical short directed by Jack Donohue.

"PROFESSIONAL JUNIOR" Camera Equipment...

Interchangeable - Removable Head Tripods



FRICITION TYPE

Handles 16mm. EK Cine Special with or without motor; 35mm. DeVry; B&H Eyemo with motor and 400' magazines and all 16mm. hand-held cameras. Head is interchangeable with the Gear Drive head. Both types fit "Professional Junior" standard tripod base, "Hi-Hat" and "Baby" all-metal tripod base.

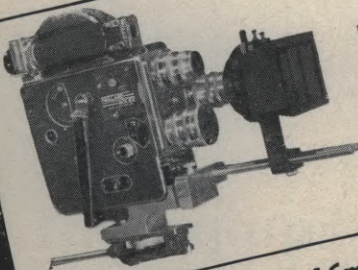
GEAR DRIVE

The head, made of Dow Metal magnesium, weighs but 5½ lbs. and is interchangeable with the Friction type head. It handles all types of cameras. Snap-on metal cranks control pan and tilt action from both sides. Worm-driven gears are Gov't spec. bronze.

Friction Type Head on Standard Tripod Base and Collapsible Adjustable Metal Triangle

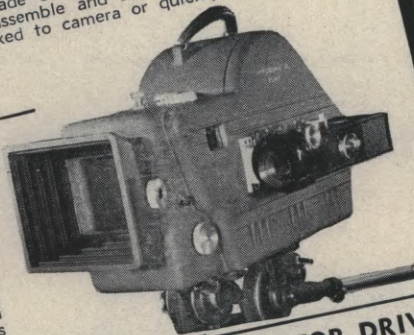
SUNSHADE & FILTER HOLDER COMBINATION

For use with Bolex and Cine Special 16mm. cameras. Holds two 2" sq. glass filters and 2½" round Pola Screen with handle which can be rotated for polarization. Covers all lenses from 15mm. to 6" telephoto and eliminates need of various filters. Precision made of the finest materials. Compact, simple to assemble and dismount. May be permanently affixed to camera or quickly detached.



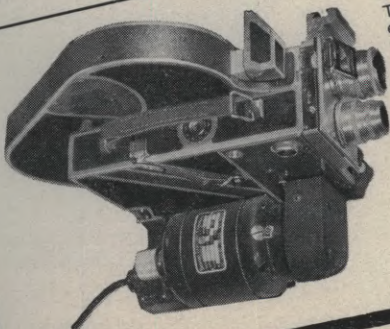
BLIMP for EK 16mm. CINE SPECIAL

This Blimp constructed of Dow Metal magnesium, is thoroughly insulated to afford absolute silent operation. Exclusive features: Follow focus mechanism permits change of lens focus while camera is operating in blimp. Blimp takes synchronous motor drive which couples to camera. A dovetail bracket is provided to mount an erect image viewfinder.



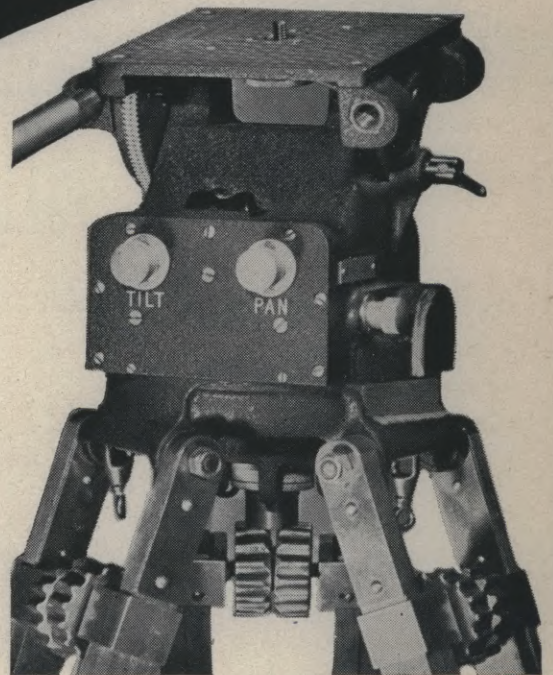
SYNCHRONOUS MOTOR DRIVE 110 Volt A. C., Single Phase, 60 Cycles

This motor will run in synchronization with either 16mm. or 35mm. sound recorders. It is provided with mounting platform which permits removal of magazine while camera remains mounted on motor. Drive coupling attaches to spring-steel drive of camera and is mated to spring-steel that arm of motor gear cannot be damaged if a camera mechanism cannot be replaced. film jam occurs as the spring steel drive will shear. This is easily replaced. A knurled knob on motor armature permits rotating for threading. "On-Off" switch built into base. Platform base threaded for ¼" and ⅜" camera tie-down screws. Rubber covered cable with plugs included.



SEND FOR OUR
ILLUSTRATED
CATALOG

... the most versatile and dependable camera accessories available for those who prefer the finest.



Small GYRO Tripod

This light weight GYRO Tripod performs with all the efficiency of larger, heavier and costlier tripods now in use.

New, small size GYRO tripod handles all 16mm. professional type cameras: Mitchell 16mm.; Auricon single system; Maurer 16mm.; motor-driven Cine Special; also 35mm. motor-driven Eyemo with 400' magazine. It features Super Smooth Pan & Tilt Action.

Positive pan-locking knob. Tilt locking lever. Quick wrist action locking knob for leg height adjustments. Pan handle can be inserted at 3 different positions on tripod head for operator's convenience or extreme tilt work. Legs are hard maple specially treated and warp resistant. Tripod head is Dow Metal magnesium and aluminum. Built-in spirit level. Swivel tie-down rings. Platform can be equipped for either ⅜ or ¼ inch camera screw.

— ALSO AVAILABLE —

Baby Tripods • 3 Wheel Portable Dollies • Changing Bags • "Hi-Hats"

FRANK C. ZUCKER
CAMERA EQUIPMENT CO.
1600 BRADSHAW HIGHWAY, NEW YORK CITY

TELEFILM

INCORPORATED

Since 1918

6039 HOLLYWOOD BOULEVARD • HOLLYWOOD 28, CALIFORNIA • HOLLYWOOD 9-7205

Thank you, Mr. Thomas

January 9, 1950

Kinevox Incorporated
4000 Riverside Drive
Burbank, California

Attention: Mr. Crespinel

Gentlemen:

After subjecting your Kinevox equipment to all the severe tests we could think of, we purchased as your records will indicate - recorders and playback equipment.

In the actual field the equipment even surpasses our fondest expectations, particularly in shooting "sync" dialogue and then dubbing to film.

I am writing this because I know how it feels to hear from a satisfied customer. We believe sincerely that you have contributed wonderful equipment which in turn allows a new technique in recording motion pictures. We are sure that this new technique shall prove of great benefit to our industry.

Sincerely,

TELEFILM, INC.

J. A. Thomas
J. A. Thomas
President

JAT/mew

• RECORDING • CINEMATOGRAPHY • EDITING • TITLES • ANIMATION • COLOR • DUPLICATING • B & W LABORATORY • FILMS FOR TV •

Manufacturers of Synchronous Magnetic Film Equipment

SYNCHRONOUS MAGNETIC
FILM RECORDER



\$1250.00

Patent Applied For

4 POSITION
AMPLIFIER—MIXER



\$335.00

Prices f.o.b. Burbank
Delivery and Performance
Guaranteed

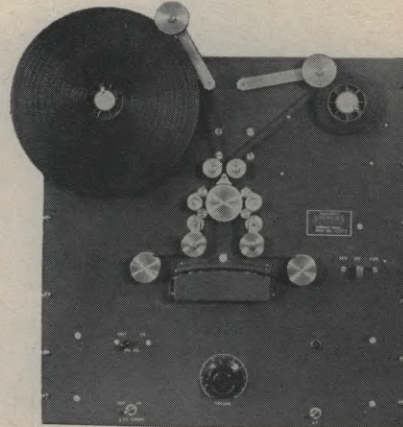
Address Communications to

KINEVOX

INCORPORATED

4000 Riverside Drive
BURBANK, CALIFORNIA, U.S.A.
CHarleston 0-8271

FILM PHONOGRAPH
(DUBBER)



\$750.00

"Be it Hollywood,
New York,
London,

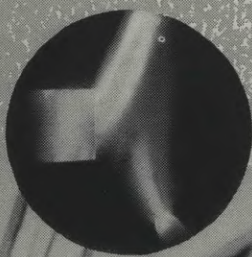
Paris or

Rome, 'National' Carbons
are Indispensable!"

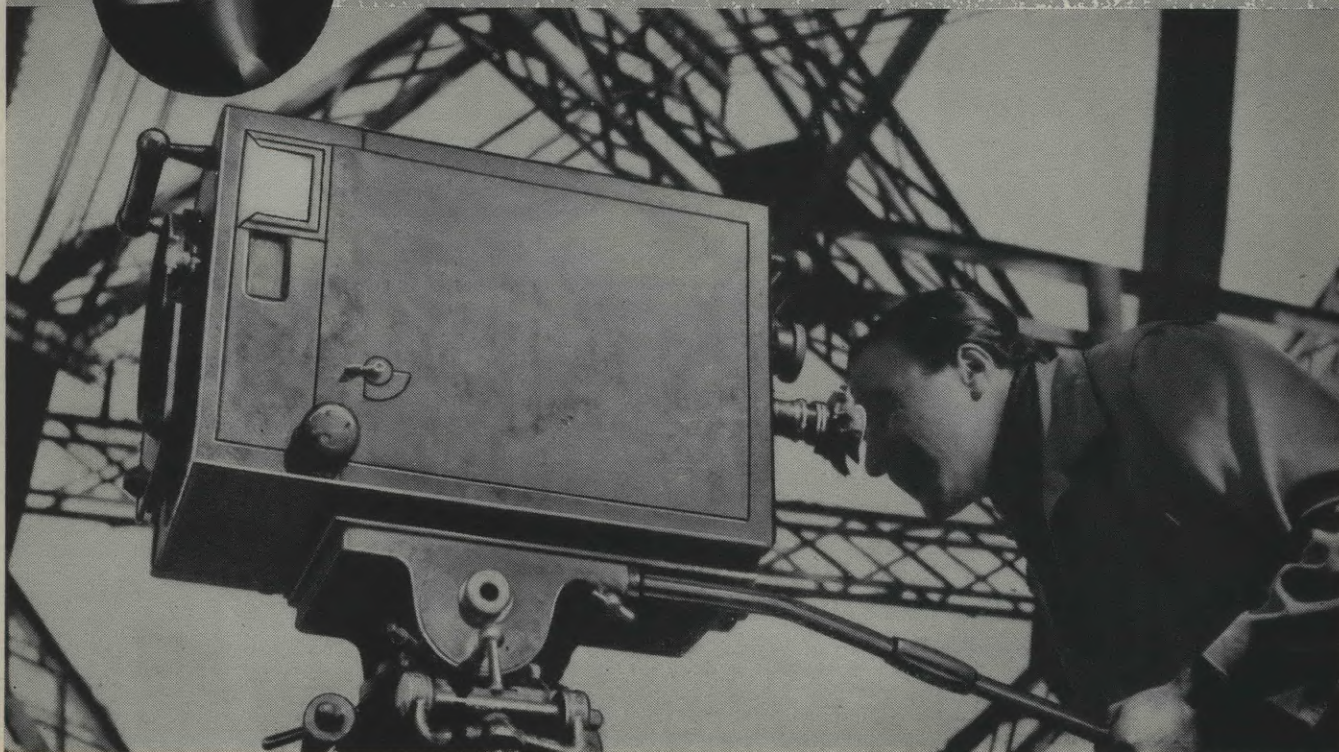
Stanley Cortez
A.S.C.

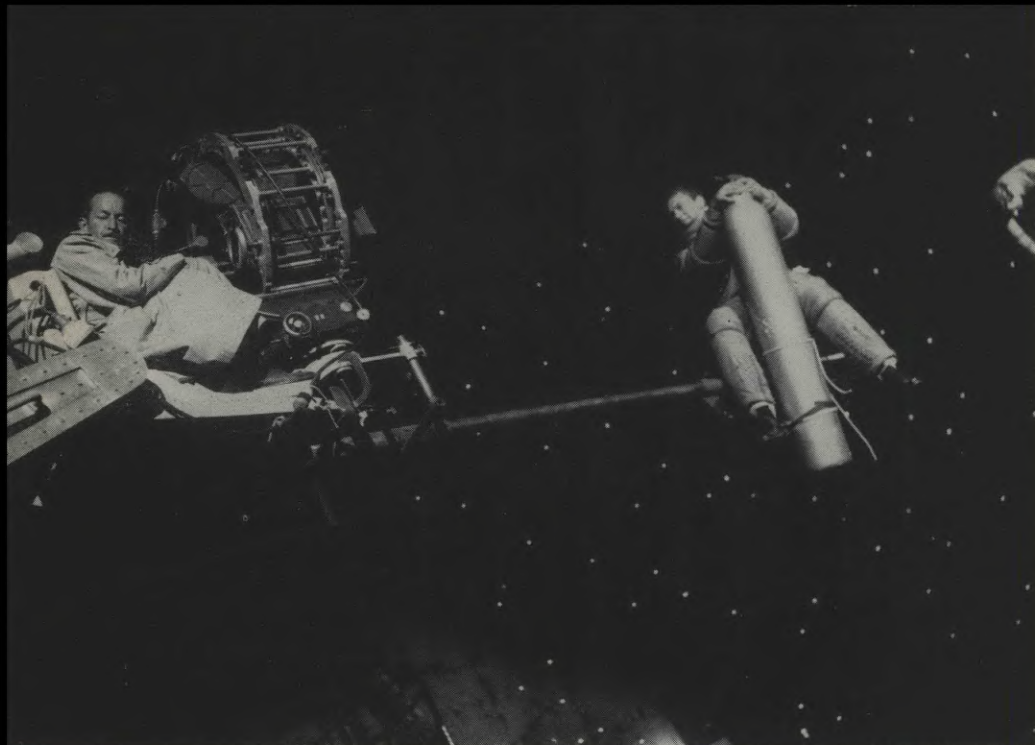
The term "National"
is a registered trade-mark of
NATIONAL CARBON DIVISION
UNION CARBIDE AND CARBON CORPORATION
30 East 42nd St., New York 17, N. Y.

DISTRICT SALES OFFICES:
Atlanta • Chicago • Dallas • Kansas City
New York • Pittsburgh • San Francisco



When you buy studio carbons—BUY "NATIONAL"





TRICK SHOT—Lionel Lindon, sitting behind Technicolor camera mounted in special rotatable camera base, films rescue flight of scientist who zooms through space on oxygen tank, sitting on extension of camera boom. White dots are "stars"—tiny auto headlight lamps.

Filming A Trip To The Moon

Novel photographic and lighting innovations employed in filming "Destination Moon," saga of scientists who rocket to the satellite and back—in Technicolor.

By LEIGH ALLEN

MOST ANY DAY now we can expect the world-shaking report that man has successfully traveled to the moon. And although the feat will have been accomplished through the magic of motion pictures, most of us who have kept abreast of world scientific developments are aware that preparations for just such an exploit have quietly been going on for some time, and that travel to the moon by rocket ship is freely considered likely to take place during this generation.

Seizing upon this timely and most intriguing idea, George Pal has deserted his ventures in animation temporarily to produce "Destination Moon," a color motion picture which concerns the adventures of four scientists who travel by space ship to the moon, explore its surface, and return safely to earth again.

Pal's picture is no hastily contrived saga from the pen of an imaginative writer running rampant. The entire story, from main title to final fadeout, is based on scientific facts and their probable consequences. And because of this, the production became one of the most intriguing assignments ever handed a Director of Photography. This important responsibility fell to Lionel "Curly" Lindon, A.S.C., who is credited with a top-drawer job of Technicolor photography. What Lindon's camera tricks did to enhance the realism of Ernest Fegte's art direction and to the highly imaginative locale contrived by author-scientist Robert Heinlein, who wrote the script, remains for the reader to observe for himself when "Destination Moon" is released next August.

Except for the sequence depicting the takeoff of the ship from a point in a Southwestern desert, Lindon filmed all of the picture indoors on the sound stages of General Service Studio in Hollywood. There, occupying the entire floor of Stage

(Continued on Page 58)



HIGH UP in sound stage rafters, Lindon makes shot of scientist on moon's surface, as seen from porthole of space ship.



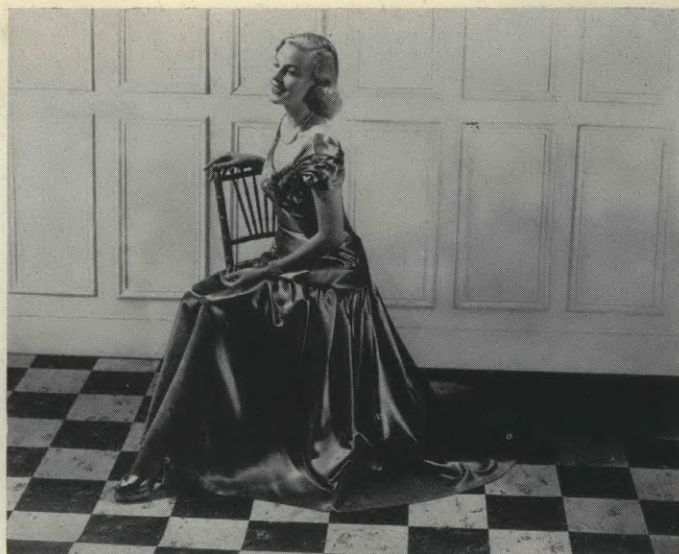
SPACE SHIP interior was built so it could be rotated or turned on side for trick shots of men walking on sides, ceiling, etc.



NO, this cut isn't wrong! It's one of the trick shots showing moon traveler with magnetized shoes walking down wall of rocket—photographed with camera turned on side.



TYPICAL studio set for a TV film in which large uniformly toned areas have been broken up by a pattern design, in order to reduce the "horizontal smear" effect frequently seen in the receiver image.



STUDIO set showing large pattern design and simple properties—a type of set which reproduces well with present television systems and which is preferred for photography of films for television.

Producing Films For Television

Continuation of the Eastman Kodak Company report on lighting, film densities and types of film recommended for the photography of motion pictures for television.

LAST MONTH we stated that a motion picture print that is to be televised should have a lower density range than one which is intended for normal projection use. The exact density will vary somewhat, of course, depending on the nature of the particular subject or scene.

The question which immediately arises is what method to use in order to obtain the desired density compression in the positive print. Upon first examination it might appear that this might be accomplished equally well in at least three different ways:

(1) In exposing the original negative, use a subject lighting contrast which is considerably lower than that which is normally used for conventional black and white motion picture photography, and process both the negative and print in the normal way.

(2) Use normal lighting contrast and exposure but alter the processing conditions of negative or positive or both, to obtain an overall reproduction gamma which is lower than normal.

(3) Use normal lighting contrast and

exposure, process the negative and positive in the usual manner, but make the print 2 or 3 or more printer steps lighter than what would be desirable if the print were to be used for normal projection purposes.

Experience has indicated that Method (1) is by far the best way to obtain the desired density compression for several reasons. First of all, this method involves no departures from standard practice in the processing laboratory operations. Secondly, the amount of density range compression provided by Methods (2) and (3) or both is not sufficient in many cases to bring the density range of the final print within the limits demanded by the television system. It is important to recognize too, that lowering of the negative and positive gamma value and manipulation of the print exposure does not result in the same tone reproduction characteristics as would be obtained with alteration of the lighting contrast given in Method 1. Finally, if Method (1) is used, some additional compression of the density range of the final positive may still be effected, by making lighter than normal prints, if this need arises, such as, for example, where the subject or scene was of a very contrasty nature.

Where it is not possible to control the lighting contrast in making the original negative, then Methods (2) and (3) might be used as a last resort. This would apply particularly in the case of motion picture production negatives that have already been released but are now being used for television broadcast purposes. On the basis of present evidence, however, such a procedure would mean a definite compromise in quality.

From the above discussion, it is evident that there is a definite limit to the maximum density in the positive print, above which, details in the shadow regions of the picture will not be seen on the receiver screen, because of the brightness range limitations of the television system. There is another reason for limiting the maximum density in the positive print. At the present time, the iconoscope camera tube is almost universally used for film telecasting. In the electronic scanning process employed with this tube, the secondary emission of electrons from the mosaic screen and the inability of the positive collector to collect all of these negative charges, results in an edge-flare effect when the density rises above a certain value or when rapid changes in den-

(Continued on Page 60)

The foregoing is condensed from "The Use Of Motion Picture Films In Television," by Eastman Kodak Company. Part 1 appeared in the January issue.—EDITOR.



NO SOFT GROUND here for tripod legs, so Vincent Farrar's camera crew holds tripod on rocky mountain-top to keep it from slipping while the camera rolls on a scene for Columbia Pictures' "The Palomino," studio's initial outdoor drama in Technicolor Monopack.

Tough Assignment

Locale, terrain and tricky colors combined to make photography of "The Palomino," Columbia's first outdoor drama in Monopack, a challenging undertaking.

By VINCENT FARRAR, A.S.C.

WHEN PRODUCER Robert Cohn elected to shoot Columbia Pictures' Technicolor production, "The Palomino," in a remote and nearly-inaccessible locale in the mountains north of Hollywood, he also set for me and my camera crew one of the most challenging of photographic assignments. Probably few Technicolor pictures produced to date involved the risks to personnel and equipment that we encountered.

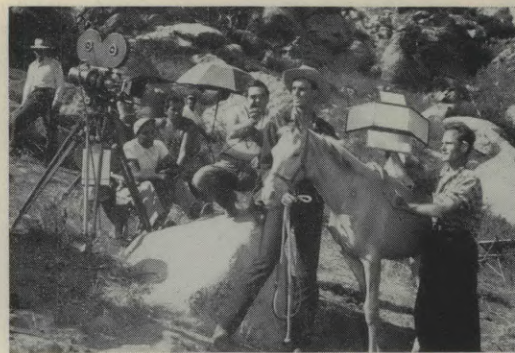
Although it is customary for Hollywood to get tried and true location areas for its westerns and outdoor dramas, Cohn decided to find a virgin spot for this unusual story, which involves a valuable Palomino horse that has been stolen and hidden away in a mountain fastness overlooking a beautiful valley.

Because of the wonderful color of the golden Palomino horses used in the picture, Cohn, from the beginning, wanted a perfect natural setting as a framework for the horses' activities. So, long before

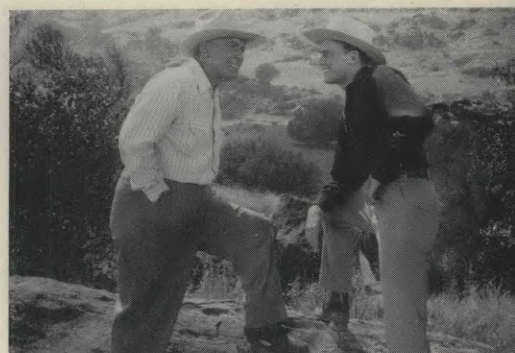
the picture went into production, an extensive search was launched for such a location. The script called for rugged, mountainous terrain overlooking a valley with bright green patches. But the time of year wasn't favorable for the fresh, green grass needed for the color cameras and for awhile the search seemed hopeless.

Location scouts scoured the Southern California countryside for several hundred miles around, but none of the spots suggested seemed to meet script specifications. And then, Jerome Courtland—star of the picture—remembered something. He recalled a certain area in the Santa Susana mountain range, 25 miles from Hollywood, where he had hunted and fished during a recent vacation. And he painted such a vivid picture of its natural beauty that Producer Cohn hustled him, Director Ray Nazarro and myself into his car and made a beeline

(Continued on Page 62)



ENDLESS rocky terrain made impractical the use of large Technicolor cameras, so "The Palomino" was shot in Monopack with a regular Mitchell.



TWO PLAYERS frame view of green valley in distant background—compositional element which led to selection of this site for the picture.



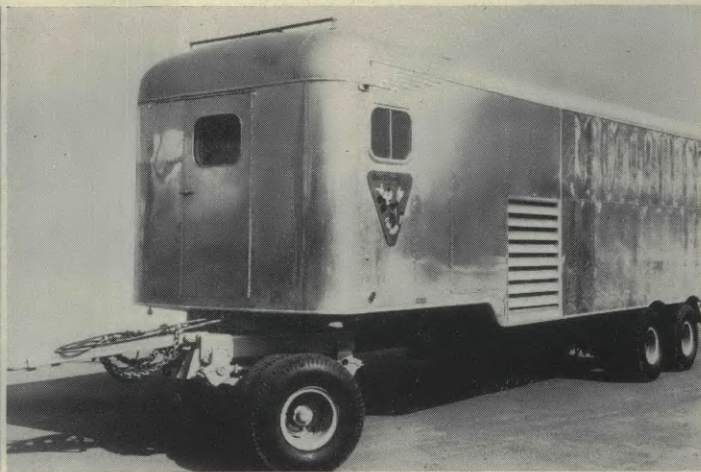
RUBBER shoes and piano wire shackles safeguarded prize Palomino performing on rocky ledge as cameraman, suspended from cliff, made the shot.



TO FILM running inserts of stampeding horses, etc., studio built a 1500 foot strip of road on the mountain top.



YESTERDAY — Whenever Disney's Studio filmed on location, this old-time motor-generator set produced enough power to light a fair sized scene, or part of it, as this picture proves. Then, as now, special provision had to be made for generating D-C, necessary for arc lights.



TODAY — This compact Westinghouse motor-generator set packs a punch—600 kilowatts worth. Disney Studio engineers designed it with an eye to safety and efficiency. So perfectly insulated is the housing that generator may be operated close to scene of shooting with safety.

WHEN a Walt Disney production unit goes shooting on location, supplying direct current for lighting equipment is a brand new mobile motor generator—product of Walt Disney Productions' Engineering Department. The 300 kilowatt motor generator set and control unit were built by Westinghouse from a full-scale mockup constructed by Disney technicians.

The motor generator has been in actual operation at Disney's Studio for some time, and also has been rented to other studios for location work. It has been entered in the appropriate category for a Technical Award by the Academy of Motion Picture Arts And Sciences for 1949.

Basically, the Disney design is said to improve previously existing apparatus in this field in mobility, flexibility, safety, sound-proofing, equipment protection,

Disney Engineers Unveil New Mobile Generator Unit

Operating safety and efficiency keynote design.

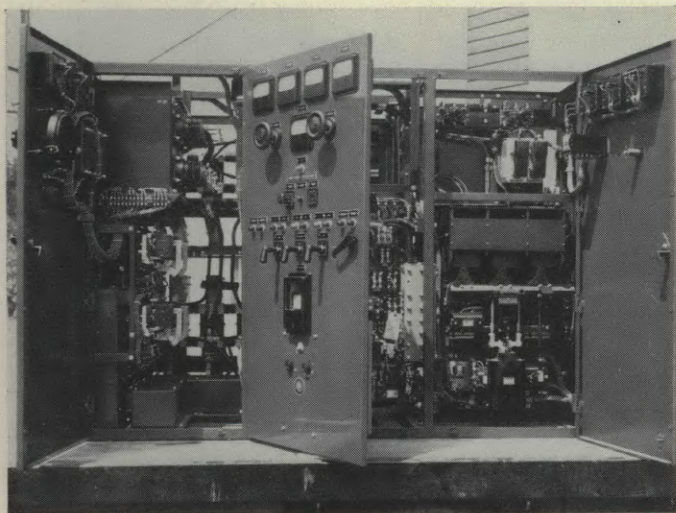
By RALPH LAWTON

simplified operation, compactness and appearance.

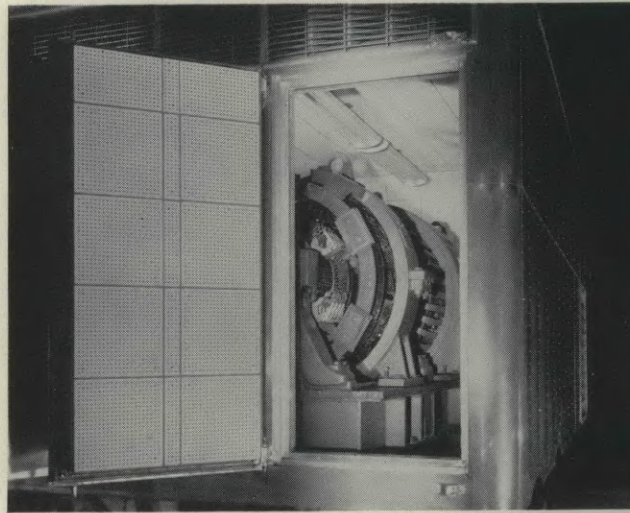
The trailer and transport unit are rugged enough to go anywhere on location where A-C power is available for transformation to D-C. The generator unit will deliver 300,000 watts—enough to produce 5,000 amperes for direct

current lighting for short periods. The trailer containing the equipment weighs 48,500 pounds, is encased in an all-aluminum body, and complies with all the recently increased State of California regulations for this kind of apparatus. Improved safety factors keynoted the

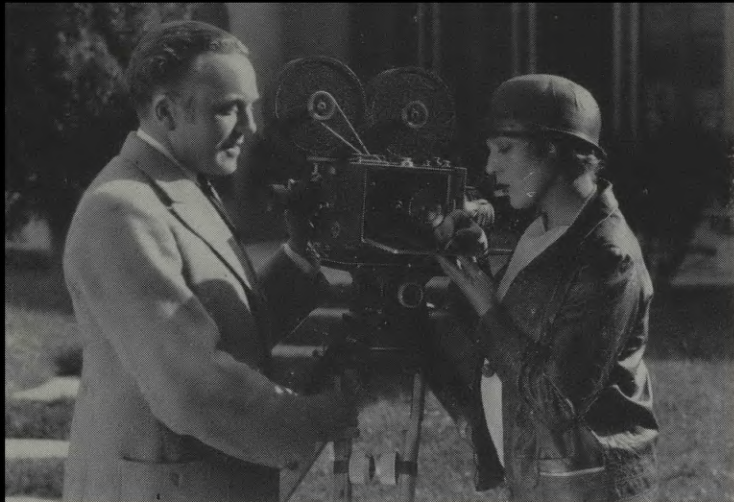
(Continued on Page 66)



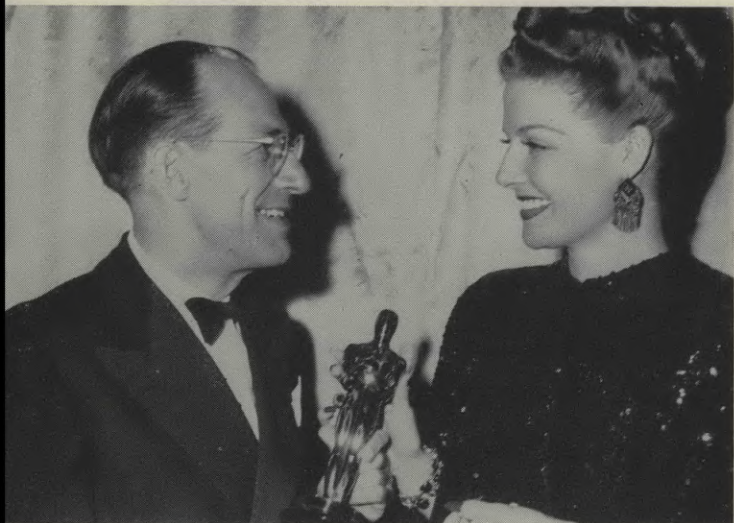
THIS OPEN VIEW of interior of mobile generator reveals compactness of equipment. Apparatus was specially designed to withstand road shocks encountered in remote location areas.



CAREFULLY engineered insulation of the motor-generator compartment is shown here, as also are the rubber insulation blocks on which the generator is mounted. Trailer weighs 48,500 pounds.



CHARLES ROSHER, A.S.C., used the first Mitchell camera to go into action in a Hollywood studio many years ago when he was Mary Pickford's favorite cameraman.



WHEN ARTHUR MILLER, A.S.C., received his first Academy Award, it crowned a long list of photographic achievements that began when, as a youth, he made and sold snapshots.



JOSEPH RUTTENBERG, A.S.C., got his basic training as a newspaper photographer and newsreel cameraman. He's now Greer Garson's favorite director of photography.



From Still Photography To Cinematography

How early training in photography opened the gate of opportunity to Hollywood for these A.S.C. cameramen.

By FREDERICK FOSTER

OUR PREVIOUS historical accounts of the rise to success of some of Hollywood's foremost Directors of Photography has dealt mostly with those men who got into the business more or less accidentally, when movies were in their infancy. Some had little or no experience in photography. Whether these men were destined to become cinematographers is a matter of conjecture; but they had the artistic gift and the imaginative mind so necessary for success in the photographic art that it is reasonable to conclude such gifts would eventually find expression through the medium of a motion picture camera.

There are some, among the industry's top flight cinematographers, however, who did come into the business from the ranks of photographers—portraitists, press photographers, and the like—and their very thorough early schooling in the fundamentals of photography and of lighting, composition, etc., proved an asset which was to give them considerable edge over many of their contemporaries in the early days of the motion picture industry.

Charles Rosher, A.S.C., who, during 1949, directed the photography on such M.G.M. productions as "Neptune's Daughter," "The Red Danube," and "Annie Get Your Gun," is one of these old master painters-with-light who was a renowned portrait photographer before taking up cinematography.

During his early youth, Rosher studied for the British diplomatic service, and clerked part time in the Consular department of the British Board of Trade. It was during this period that he took up amateur photography, and within a few years was exhibiting his work in British photographic salons, including those of the Royal Photographic Society. Besides taking many salon awards, his work was published in British photographic magazines. Subsequently he apprenticed himself to David Blount, famed British portrait photographer and founder of "The Linked Ring," exclusive photographic society in London. He studied fundamentals of photographic chemistry under Howard Farmer, a photographic pioneer and discoverer of many important photo chemical formulas. Later, he became chief operator for Richard Speaight, world renowned Court photographer of New Bond Street, London, whose clientele were the royal families and nobility of Europe.

A few years later—1908 to be exact—while visiting the U.S., Rosher attended a convention of the Photographers Association of America where he met George Eastman, also George Harris of

(Continued on Page 58)

KARL STRUSS, A.S.C., once a prominent photographic illustrator, celebrated his 28th year as a cinematographer on the set of "Atlantis."

CONGRATULATIONS

To All Directors of Photography

NOMINATED

For Academy Awards For

OUTSTANDING PHOTOGRAPHY

Black and White and Color

And To Their Associate

OPERATIVE and ASSISTANT

CAMERAMEN

SALUTE

TO THE WINNERS

EASTMAN FILMS

J. E. BRULATOUR, INC.

DISTRIBUTORS

16mm. and 8mm. Cinematography

SECTION



EXCELLENT pictorial composition is self-evident in this prize still. Note how the photographer made use of the picturesque cloud formation as a backdrop for his subjects, then set his camera low for heightened dramatic effect.

How To Get Good Composition In Cine Photography

It's essential if you aim for professional results in your movie making.

By CHARLES LORING

COMPOSITION, as it applies to motion pictures, is a subject which too many amateur movie makers shun in the belief it is well over their heads and far too complicated to understand except by professionals. Not only is this untrue, but the serious cine amateur—before he can hope to progress to or approach the professional level of cinematography—must know composition and know it well.

This need not be a discouraging thought. It does not mean long hours spent in studying the elements of composition. Surprising enough, most serious filmers who are doing advanced work

with their cameras are fairly well versed in the elements of composition by virtue of a natural born artistic instinct, which is invariably found in the cameraist who loves photography. So we can skip some of the elementary stuff and jump right into a discussion of practical composition as applied to motion picture photography.

Pictorial composition for the screen differs from that employed in almost any other art form mainly because it is essentially *fluid* rather than *static*. By fluid we mean that it constantly changes as the camera and the elements of the scene move and change special relationship.

The moving camera—mounted on

crane, dolly or camera car—is part and parcel of the moving picture. The camera should be free to move for the purpose of following action or emphasizing a situation. Similarly, players should be free to move within the frame so that the action will not be restricted. Static compositions in which the players dare not move for fear of disturbing the balance are deadly to the motion picture. One might just as well film a series of still pictures.

Screen composition, then, is a constantly changing thing—but it has its rules and can be controlled quite precisely through proper co-ordination of camera and action. The cameraman's one never-changing element in composition is the frame itself—a rectangle in 3 to 4 proportion into which everything in the picture must be made to fit. The cameraman must learn to look at every new screen situation in terms of how it will appear when set in a horizontal space of the above proportions.

The frame itself is a prime compositional element into which the other elements fit, and by moving the frame lines in relation to the subject any number of different compositions can be achieved. The cameraman can profitably experiment at times by trying different types of framing before actually shooting the scene.

The rule of "thirds" is a basic principle of composition in all of the graphic arts, but it applies particularly to motion pictures, especially in long panoramic shots which embrace a good deal of area and many separate details. In applying the rule, the cameraman must imagine that the screen is divided into thirds—both vertically and horizontally. For the most pleasing composition the most important details of the scene should fall at points where these lines intersect. Obviously, this is no hard and fast rule, nor should it be adhered to so literally that the action becomes static.

Usually a precisely centered or symmetrical composition lacks drama. In most cases it is better to shoot the subject from one side or the other in order to create some sort of emphasis. However, there are exceptions to this rule as well, for there are times when a completely symmetrical composition is artistically pleasing on the screen. This sort of arrangement is usually most effective as a background to action which follows a less regular pattern.

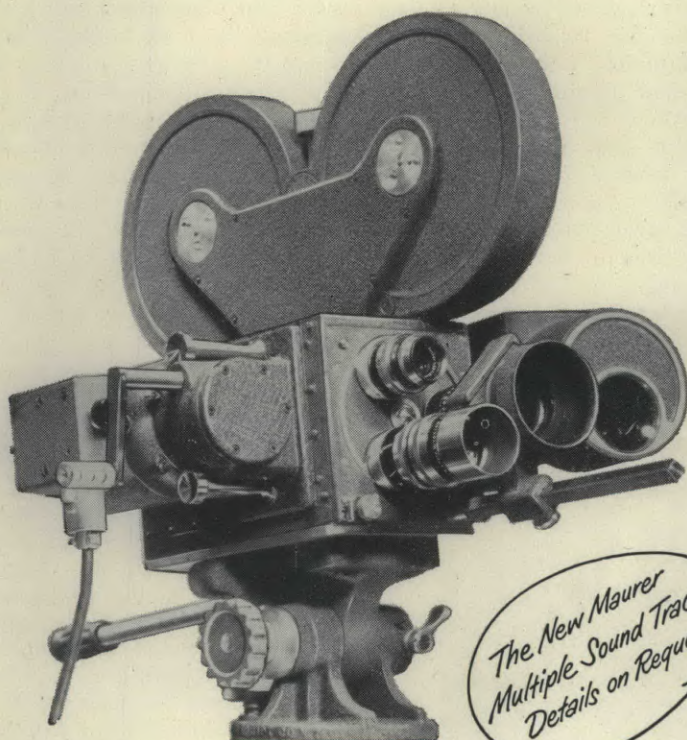
The horizon line is an element of
(Continued on Page 64)

TV FEATURES

OF THE

MAURER

16 MM. CAMERA



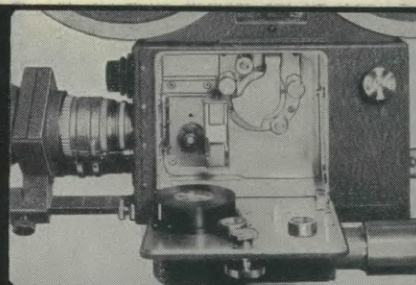
The Maurer 16 mm. camera is the answer to your exacting TV production requirements. Designed *specifically* for professional use, it produces steadier, sharper and more accurately composed pictures under all conditions. Ease of operation, combined with many other unique features make the Maurer Professional tops in performance and dependability.

The 16 mm. Camera Designed Specifically for Professional Use!

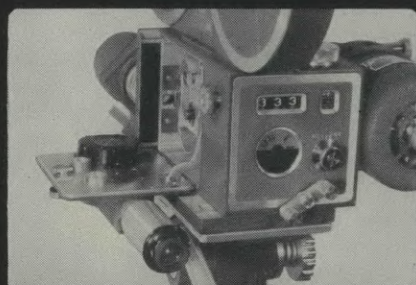
*For details on these and other exclusive
Maurer features, Write:*

J. A. Maurer, Inc.

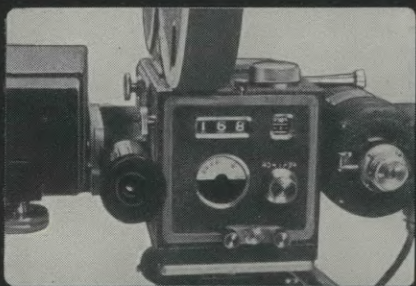
37-01 31st Street, Long Island City 1, N. Y.



In the exclusive Maurer intermittent movement the functions of the pull-down claw and registration pin are combined, giving accurate registration in old or new film. Because it depends to a minimum extent upon the accuracy of 16 mm. perforations, this movement provides the most accurate registration obtainable.



The unique Maurer focusing system provides full field composition through the taking lens. The image seen through the clear glass reticle permits the greatest magnification ever obtained in a motion picture camera for critical focusing, therefore obtaining the greatest accuracy.



The Maurer variable shutter has a 235° open segment . . . allowing use of a smaller aperture with the same lighting . . . giving greater depth of field. Calibrated in 1/2 lens stops, it permits quick and accurate change of exposure while shooting. The additional light transmission permits you to shoot your originals in color easily, a factor which is valuable now and may become much more important.

16mm
maurer

Filming Wild Birds in 16mm. Color

Periscope and burlap blind aid in securing rare films of bird life.

By F. C. MOULTRIE

HAVING MADE numerous amateur photoplays, commercial films and travelogues over a period of years, this writer decided recently to make a 16mm. motion picture of wild bird life in color, assisted by a fellow cine amateur. We had read a great deal about the types of "blinds" used by other photographers and as a result equipped ourselves with a conventional type burlap shelter in which to conceal ourselves and our equipment.

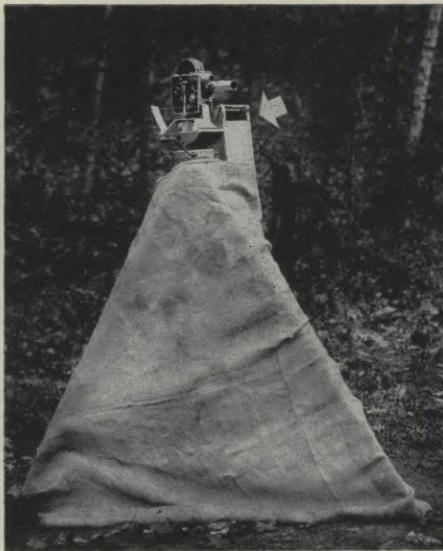
We believe in using a rugged, rock-steady support for the camera. Therefore my 16mm. Bolex was mounted upon an adapted 35mm. tripod which, though extremely heavy to carry through miles of bush and marshland, still remains an invaluable asset. When we decided to film our bird subjects, we had already entered upon the nesting-season for migratory birds in our part of the Continent, and we had no time to lose if we were to secure a good selection for our film record.

In the vicinity of the Great Lakes, where we are located, we are sometimes subjected to strong, gusty winds in late Spring and early Summer and, in spite of our determination to demonstrate the necessary degree of patience, the burlap sides of our blind would occasionally indulge in violent and uncontrollable flappings. What bird could retain its equanimity in the proximity of a strange, bulky creature with a rapidly pulsating and noisily flapping carcass? It is not surprising that a timid wild bird will often remain away from its nest hours, even a day at a time, when so confronted.

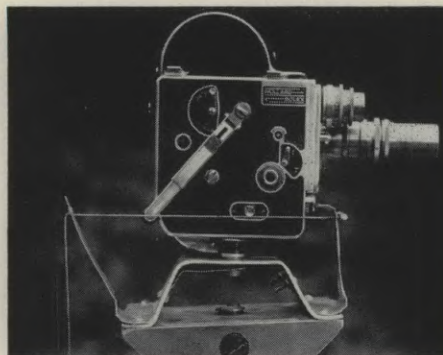
Nevertheless, in spite of this handicap, we succeeded in securing some very fine shots, though we were becoming more and more convinced that something better would have to be devised if our nerves were to survive the ordeal!

Even when using a 75mm. telephoto lens, it is still necessary to be quite close to a small bird if it is to fill a large enough area of the frame; and, with sun pouring down relentlessly on the exterior of the blind, there is enough discomfort from the heat and insects to try one's fortitude to the limit. Yet it is often required to remain quiet and still for hours at a time. In one case we had

to return to the same spot three days in succession before the timid little creature that was our subject would return to its nest. In another case, two full days of waiting were sustained. This, in spite of setting up dummy blinds each day as we left, in the hope the bird would become accustomed to its presence. With the imposition of such an "endurance test," it is extremely undesirable to have a bird frightened away at a critical moment through circumstances which,



SIMPLE burlap "blind" shown here conceals only the camera operator. The camera, pre-focused, is set in motion by remote control by the concealed operator whenever subject appears within field of view of the lens, as observed by the operator through the periscope, indicated by arrow.



AUTHOR'S quickly improvised remote control and camera actuator is shown here, made from strips of springy Duralumin. The 16mm. Bolex camera is set in motion by a downward pull on the cord, and stopped when the cord is released.

we began to feel, might be corrected.

While muttering to ourselves for the hundredth time "Something will have to be done about this," we suddenly had an inspiration. We were now thinking more about our personal comfort for, in wriggling this way and that, we were adding to the capers of the wind by prodding the burlap sides with head or elbows. It was here that we conceived the idea of using a periscope. This, we reasoned, should at least permit one to recline at comparative ease on the ground while watching for the bird's return by "remote control."

That night we constructed a simple periscope from cardboard and two mirrors from a ladies' compact. We also wished to control the camera from below. We were unable to purchase a long antinuous release locally, so, requiring something in a hurry, we constructed a very effective and foolproof triggering device from some springy, sheet Duralumin, which we actuated by pulling downward on a length of fishing-line. After thoroughly testing its operation, having fulfilled the requirement of ruggedness and infallibility, we duly set it up the following day and found that we were able to make ourselves so much more comfortable by its use and that it was now possible to remain still with much greater ease. It was a quieter day, too, and, when our bird returned he was clearly visible as we watched, unseen, through our periscope from near ground-level. The results were extremely gratifying and we congratulated ourselves upon having developed the "perfect system."

We were still plagued by the flapping burlap sides of our blind, however, and felt sure that our need for endurance was being unnecessarily prolonged by it. The terrain often prevented the use of tent-pegs to provide additional security and on one occasion the wind blew so violently that the structure filled out like a balloon and the entire outfit, camera and all, toppled over. Fortunately it was saved in time, but its setting had been disturbed and a new light-reading had to be taken, and general adjustments re-made.

(Continued on Page 64)

For the **WINNER...**

of
**AMERICAN CINEMATOGRAPHER'S
1950**

**AMATEUR MOTION PICTURE
COMPETITION**

**This Handsome
AMERICAN CINEMATOGRAPHER
AWARD**

In addition -- six Achievement Awards!

**Less than 30 days remain
to enter films!**

**Competition closes
midnight, March 1st!**



Kathryn Grayson, star of M-G-M's forthcoming "The Toast of New Orleans," presents for our reader's inspection the handsome American Cinematographer Award that goes to lucky winner of American Cinematographer's 1950 Amateur Motion Picture Competition.

R U L E S

- Each entry must be wholly amateur produced, except for any titles and film laboratory work. Any sound accompaniment must be recorded exclusively by the entrant or club submitting the film.
- Competition open to members of amateur movie clubs within the U.S. Clubs will evaluate and enter the best 8mm. and best 16mm. film completed by a member since January 1, 1948. Individuals (non-club-members) may also compete by submitting films to their local amateur movie club for entry at discretion of the club. (Refer to your local camera store for name and address of local club, or write the Editor.)
- Amateur movie clubs may enter films not to exceed 4, as follows:
 - Best 8mm. member-made film.
 - Best 16mm. member-made film.
 - Best 8mm. non-member film.
 - Best 16mm. non-member film.
- Film length limits: 16mm.—800 feet. 8mm.—400 feet.
- Entry Fee: \$1.00 for each subject submitted
- Each film reel as well as its container must be plainly and securely labeled with owner's name and address **plus** name and address of club entering the film.
- All films must be shipped on reels and in cans to contest headquarters fully prepaid. Entry blank and fee should be mailed in advance of film. Films will be returned directly to owner via Express collect, fully insured. **Be sure** to indicate value on your entry blank for which films are to be insured.
- Please indicate make and model of camera and the lenses used in making your picture, also brand of film used. This information will have no bearing on evaluation of films, but is desired by judges for reference.
- All entries must be submitted before **March 1, 1950**. Send for your entry blank which may be obtained by writing The Editor, American Cinematographer, 1782 No. Orange Drive, Hollywood, Calif.



LIKE OLD TIMES—Fellow A.S.C. members and old-time associates gathered in Hollywood recently to honor Fred W. Jackman, executive vice-president of organization. Re-enacting the shooting of an old silent-days movie are (standing, left to right) Mack Sennett, Hal Roach and Jackman. Seated are Charles G. Clarke, A.S.C. prexy and Jack Warner.



CHARLES G. CLARKE presented commemorative plaque to Fred Jackman, honoring his many years service to members of the A.S.C.



MACK SENNETT laughed when told by Hal Roach (left) how he and Fred Jackman made their first motion picture together, using negative borrowed from Sennett.

Fred Jackman Feted By A.S.C.

More than one hundred and fifty members of the American Society of Cinematographers and their friends gathered together at the Society's clubhouse in Hollywood, the night of January 11th, to honor Fred W. Jackman, Executive Vice-President and Treasurer of the organization.

Ordinarily the man who arranges the Society's festive affairs each month, Jackman had the tables turned on him in what proved a surprise dinner in his honor arranged by A.S.C. President Charles G. Clarke.

Several of Fred Jackman's early associates were on hand to pay him special honor, including Mack Sennett, who Jackman served for many years as cinematographer; Hal Roach, Jr., for whom he photographed Harold Lloyd comedies and feature films; and Jack Warner, of

Warner Brothers Studio where Jackman installed one of the first and finest trick effects departments in the industry.

President Clarke paid tribute to Jackman for the many services he has performed for the Society in the 30 years he has been a member, and in behalf of the members of the A.S.C. presented Jackman with an engraved plaque commemorating this service. Engraved on the plaque is the following inscription:

"Presented To Fred W. Jackman in appreciation of his many years of faithful and untiring devotion to the interests of members of the American Society Of Cinematographers—January 11, 1950."

Another gift was an old time Pathe motion picture camera, a fitting memento of bygone days when Fred Jackman operated a replica of this camera for Mack Sennett and Hal Roach. The camera,

complete with tripod and a "gag" slate, suggesting it had been used in filming "The Great Train Robbery" at turn of the century, was the gift of Cliff Thomas, head of Hollywood Camera Exchange. Ray Fernstrom and Virgil Miller rounded up old-time props such as puttees and visored cap—regulation attire for cameramen in those days.

After the presentation, a reel of film was screened showing some examples of Jackman's famous trick photography, which highlighted Mack Sennett's early-day Keystone comedies.

Fred Jackman was first elected president of the A.S.C. in April, 1921, and served two terms. He was again elected to this office in 1941, served two terms. He was elected Executive Vice-President and Treasurer in 1943—a post he has held continuously ever since.

Lee Garmes To Film TV Series

An organization made up of former David Selznick personnel, including cinematographer Lee Garmes, A.S.C., and headed by William Dieterle, veteran film director, will produce television films exclusively for Don Lee's Hollywood television station.

Films of half-hour length will be produced for telecasting over KTSL and also will be syndicated to other TV stations in the U. S.

More Cash For Television Films

An encouraging note for producers of television films is word that Proctor & Gamble, soap manufacturers, influenced by the steadily increasing sales of television sets nationally, is now paying \$5000 per film for the ten TV films made under aegis of Bing Crosby. In comparison, company is said to have paid only \$3750 for each of the 52 films it bought last year, and it is estimated they'll bid to \$7500 each for others before end of year.

B&H President Honored By National JC's

The United States Junior Chamber of Commerce, representing 1800 local Junior Chambers of Commerce and over 160,000 members, has announced the selection of Charles H. Percy, 30, President of Bell & Howell Company, as one of the Ten Outstanding Young Men of the Nation during 1949. Percy, head of one of the country's leading photographic equipment manufacturers, was the only businessman chosen this year to receive the award. He was presented with the Distinguished Service Award Key and Scroll of Honor by Paul G.

Hoffman, ECA Administrator, at an award banquet held in Peoria, Illinois, January 21, 1950.

The award is presented annually to the ten men between the ages of 21 and 36 "who have won outstanding success in their fields and have advanced the welfare of the people on a national level." Percy was the joint nominee of the Junior Chambers of Commerce of both Evanston (Ill.) and Chicago. Commenting on his nomination, Lem H. Tate and Laurence C. Buckmaster, spokesmen for both organizations, said: "Chuck Perry was the unanimous choice because his achievement is an example of the finest kind of business leadership that young men of our generation are capable of furnishing."

Alfacolor—New British Color Film Announced

Meeting the demand in England for a 16mm. color film suitable for both amateur and commercial purposes is the Alfacolour system recently introduced by the Alfa Laboratories Ltd., 72 Wardour St., London. Alfa-colour is a bi-pack system which is three-color developed.

Processing of 35mm. Alfacolour begins this month at Alfa's new laboratory recently constructed at Redhill, Surrey. The company expects shortly to announce its new negative-positive color process for 16mm.

Pioneer East Coast Studio Dismantled

The old pioneer Filmcraft Studio in New York has finally gone dark after almost a half century of continuous operation. Originally known as the Edison Studios, the block long six story structure gave birth to many of the early movie greats and was the proving ground for present day Hollywood techniques.

Paramount, Universal, Audio Productions, Columbia, Soundmasters and many Independents frequently used Filmcraft's facilities, but the volume of Eastern production never quite succeeded in keeping the studio busy after the war. For several years J. A. Tanney, head of S.O.S. Cinema Supply Corp., who handled the property for the former Mills interests, attempted to find a suitable successor.

Tanney has moved hundreds of spotlights, dimmers, dollies, lamps, jacks, barndoors, background projection equipment, cameras, Selsyn motors, sound playbacks, microphone booms, etc., to his own warehouses in Midtown Manhattan where the equipment is now being offered for sale.

Nominees For 1949 Academy Awards For Cinematography Announced

Fox Cameramen lead list with a total of six nominees

Final nominating ballots went into the mail January 28th, addressed to all Directors of Photography in Hollywood, following the special screening of the last of the twenty films nominated for Academy Awards for Cinematography from the preliminary list submitted by the cameramen early this year.

The titles of more than fifty black-and-white and color films were submitted for consideration, and this list was narrowed down to twenty—ten black-and-white and ten color—in the preliminary balloting.

The twenty films and the Directors of Photography who filmed them are as follows:

Black and White: "All The King's Men," by Burnett Guffy, A.S.C. (Columbia); "Champion," by Frank Planer, A.S.C. (United-Artists); "Battle-ground," by Paul Vogel, A.S.C. (M-G-M); "Come To The Stable," by Joseph LaSelle, A.S.C. (Fox); "The Fountainhead," by Robert Burks, A.S.C. (Warner Bros.); "Pinky," by Joseph MacDonald, A.S.C. (Fox); "The Heiress," by Daniel Fapp, A.S.C. (Paramount); "A Letter To Three Wives," by Arthur Miller, A.S.C. (Fox); "Prince Of Foxes," by Leon Shamroy, A.S.C. (Fox); and "Sands Of Iwo Jima," by Reggie Lanning (Republic).

Color: "The Barkleys Of Broadway," by Harry Stradling, A.S.C. (M-G-M); "The Blue Lagoon," by Arthur Ibbetson (J. Arthur Rank-U.I.); "Jolson Sings Again," by William Snyder, A.S.C. (Columbia); "Little Women," by Charles Schoenbaum, A.S.C. (M-G-M); "Look For The Silver Lining," by Peve-rell Marley, A.S.C. (Warner Brothers); "Red Canyon," by Irving Glassberg, A.S.C. (Univ.-Int.); "Oh, You Beautiful Doll!" by Harry Jackson, A.S.C. (Fox); "The Red Pony," by Tony Gaudio (Republic); "Sand," by Charles G. Clarke, A.S.C. (Fox) and "She Wore A Yellow Ribbon," by Winton Hoch, A.S.C. (Argosy).

Again this year, Twentieth Century-Fox leads the list with a total of six nominees; Metro-Goldwyn-Mayer is next with three and Columbia and Warner Brothers tie for third place with two each.

Result of voting on the ballots now in the mail will narrow the above list down to five black-and-white and five color films, from among which members of the Academy of Motion Picture Arts

and Sciences will select the best film in each class and prepare a gold "Oscar" for its photographer.

The winning Directors of Photography will not be announced until the night of the Annual Academy Awards presentation, which will take place this year at the Hollywood Pantages Theatre, the evening of March 23rd.

New Light Balancing Filters Announced

Four new filters which extend the present series of Kodak Light Balancing Filters (yellowish) have been announced by the Eastman Kodak Company. These filters, Nos. 81E, 81F, 81G, and 81H Kodak Light Balancing Filters, will be available from Kodak dealers in 2- and 3-inch gelatin film squares. The 81E and 81H will be available within the next few weeks in Series V and Series VI Kodak Combination Lens Attachments.

As in the case of the Kodak Light Balancing Filters Nos. 81 through 81D, each of the new filters lowers the effective color temperature of the exposing light about 100°K more than the preceding member of the series. With the complete series, photographers will now be able to select precisely the correct light balancing filter for use with various color films and different types of flash lamps. Combinations of filters can be used to meet special requirements.

Those Russians—What Inventors!

Russia now claims for discovery, among other things, that it is the "birthplace of motion pictures." An International News Service report stated recently that a Soviet newspaper has credited Russian scientists with the development of film itself, invention of the first movie camera and the first to use the "fadeout." Another Russian publication credited the Reds with being the first to create both negative and positive film, first inventors of color film and the first to introduce sound films.

Universal-International Adopts Magnetic Recording

Universal International joins the parade of major studios turning to magnetic tape and film for sound recording of pictures. Studio's experiments in magnetic recording of sound sequences reached a new high in extensiveness during the filming of location scenes for "Outside The Wall."

FILMING A TRIP TO THE MOON

(Continued from Page 46)

4, was a vast exterior representing the spot on the moon's surface where the scientists land with their rocket ship. Here the best scenic artists Hollywood can produce worked with art director Fegte in re-creating what is considered the present day terrain and landscape of the moon. All the while this vast set was being constructed, cinematographer Lindon worked closely with the scenic artists and with the famous astronomical painter, Chesley Bonestell, who aided in the set design, that his lighting should match that painted on the vast backdrop covering the stage on three sides.

On another stage were constructed sections of the space ship where most of the action of the picture takes place. Here the intrepid scientists were to undergo new and startling experiences, as the ship entered the vacuum far beyond the gravitational pull of the earth—such as floating in space and the ability to walk up the walls and on the ceiling of their compartment in the space ship, much the same as flies. Powerful magnets attached to the soles and heels of the men's shoes, according to the script, afforded them this strange new power.

In another sequence the four scientists, in heavily-padded suits and helmets, emerge from their compartment within the ship during its flight to inspect a jammed radar antenna. On the screen they appear to exit from a port on the under side of the ship as it zips through space, walk out on the ship's surface, heads down, then walk in their magnetized shoes around the slick streamlined body—like human flies—until they are seen on top.

For all these scenes, Lindon was aided by several pieces of unique camera equipment and by ingenious engineering of the sets. The first set described above—that of the space ship interior—was built to rotate both vertically and horizontally. Thus, to photograph the men walking up the walls of the compartment, the set was simply turned over on its side, and the men performed normally.

Lindon's camera was mounted on a large crane. Position of the crane was never moved in order to get reverse shots or change in camera angle. Instead, the set was revolved a quarter or half turn, a section of the wall removed, and the action photographed.

To create the illusion of the men walking upside down like flies on the belly of the ship, in the second scene, Lindon employed a unique rotating camera base. Shown in the photographs, the apparatus permitted turning the camera upside down to photograph the men walking

normally on top of the ship. To catch the men coming up over the side, the camera was stopped and turned right side up, then the ship was rolled over and the men filmed walking normally, as before. The illusion was completed through deft cutting of the film in the editing.

Another interesting sequence takes place when one of the men decides to walk aft on the ship to inspect the rocket tubes, which were thought to be damaged in the takeoff. In an unguarded moment, the man releases his shoe magnets from the ship's metal surface and falls off into space. But instead of dropping out of sight into the vast void, he simply floats in space like a cork bobbing in water. You see, he's beyond the gravitational pull of the earth, in vacuum. The story provides for a spectacular rescue by one of the scientists, who secures an oxygen tank from within the ship, wraps his legs and arms around it and projects himself into space by opening the valve in the oxygen tank. The tank thus acts something like a rocket—the escaping oxygen pushing it through space with its passenger.

Thus propelled through space, the rescuer reaches his drifting pal, takes him aboard, and, pointing the oxygen exhaust tube in the proper direction, is propelled back to the space ship.

Imaginative? You bet! But, according to scientists, all this easily could take place in the void far above the earth. Here again, Lindon's resourcefulness was called upon to make this action as real as eating breakfast. First there was a problem to overcome. Because this was a Technicolor picture, powerful lighting was required on the set and this precluded suspending the drifting actor by means of "invisible" wires, because the wires would show up in close shots. So Lindon resorted to an old trick—covered a camera dolly with black velvet, placed the actor upon it, and filmed away with the camera set low to catch the starry background.

For additional shots of this same action, he ran a stout plank from the end of the camera boom, placed his actor upon it and focused the lens so it would just miss the improvised support. For additional scenes, the studio, overnight, constructed a sturdier boom of tubular steel, made it telescoping and provided a small padded seat for the player, and the action was completed the following day.

Lindon's biggest lighting problem on the moon set was keeping the atmosphere crystal clear, as scientists say it is on the moon. The arc lamps were a constant

source of blue smoke and it was necessary to keep huge exhaust fans working, all the ventilators going, and all stage doors open in order to keep the atmosphere clear.

Another problem were the simulated stars in the background of the set. These were small automobile headlight bulbs—between 1700 and 2000 of them—suspended on small wires from the stage ceiling. Each lamp was wrapped with a piece of filter gel to make its light appear white to the Technicolor camera. Because the gels would fade from the lamps' heat over a short period of time, Lindon said, they had to be replaced twice daily—at noon and again at night after the day's shooting had been completed. The wiring for this network of "stars" amounted to over 70,000 feet!

From the very start, producer George Pal insisted that the picture must not have anything remotely suggesting fakery. For this reason he employed as technical advisers some of the best scientific brains currently studying space ship engineering and navigation, and experts in astronomy—and, of course, Lionel Lindon to translate their unified conception into visual reality through the medium of Technicolor photography. "Destination Moon" is high on the "must" list of pictures to see during 1950.

STILL PHOTOGRAPHY TO CINEMATOGRAPHY

(Continued from Page 50)

the famous photographic firm of Harris & Ewing. Harris, who knew of Rosher's reputation as a photographer offered him a job as operator which he accepted. It was while he was employed here that Rosher became interested in motion picture photography. He bought one of the old Williamson cameras and now devoted much of his time to shooting news events, which he sold to various news-reel companies. This led to a meeting with William and David Horsley, heads of the old pioneer Centaur Film Company in Bayonne, New Jersey, who hired him as a cameraman and sent him out to California in 1911 to their Hollywood "branch"—the old Nestor Studio—the first in California, incidentally, located at the corner of Sunset Blvd. and Gower Street, where Columbia Broadcasting Company's studio now stands.

When Universal Studios were completed, Universal took over Nestor and Rosher moved his camera out to the valley lot to become one of Universals first cameramen. Subsequently he went to Mexico to film the activities of the real Pancho Villa, and when he returned to Hollywood he joined the Jesse Lasky Feature Film Company which later be-

came Famous Players Lasky. There Rosher met Mary Pickford and began an association with the famous star that was to last more than a dozen years. Directors and leading men might come and go, but for years—right up to her retirement—no one but Charles Rosher was trusted to photograph the First Lady of Hollywood. When Miss Pickford spoke at the dedicatory ceremonies opening the George Eastman House, in Rochester, New York, recently, she credited Rosher with being the first cameraman to use artificial light as booster illumination for exterior shots. He is also credited with being the first to use arc spotlights for key lighting. Generally considered one of the few masters of things cinematic, Rosher remains, nevertheless, an avid student of photography. One of the founders of the American Society of Cinematographers, Rosher is also a Fellow of The Royal Photographic Society, and an Associate of the Photographic Society of America.

Karl Struss, A.S.C., is another of Hollywood's camera aces who had built an impressive reputation as a portrait and commercial photographer before taking up cinematography.

Karl Struss began his study of photography as a pupil of Clarence H. White in 1908. In 1912 he graduated and took over White's studio on West 31st Street in New York City. At first, Struss set himself up as a portrait photographer. Then he switched over to magazine illustration and advertising photography, which was then just beginning its triumphant progress. When World War I broke out, Struss joined the service and became an instructor in aerial photography in the army air force. When the war ended, Struss logically enough went to Hollywood. First he got a job as still photographer with Cecil B. De Mille. In three months he was promoted to a motion picture camera as a second cameraman. In 1927, when sound came in, Struss was elevated to director of photography.

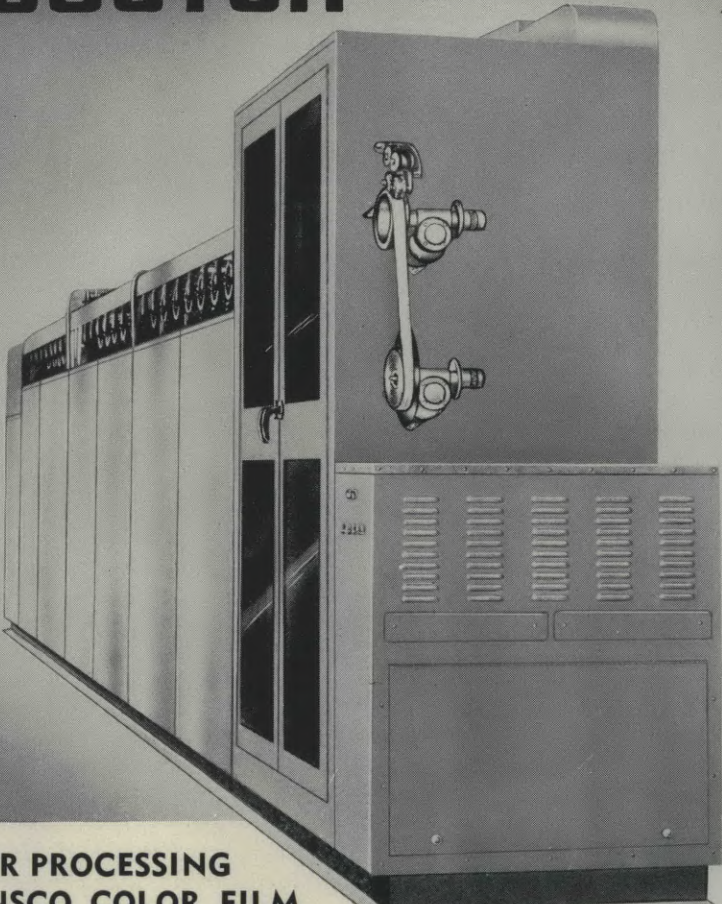
With the possible exception of westerns, every conceivable type of feature production has flowed through his camera. He has gone from DeMillian spectacles to out-and-out horror dramas in both black and white and Technicolor. Last month he completed the photography on a feature production based on the life of a circus midget.

Karl Struss made the great change from pictorialist to motion picture photographer smoothly, and developed into an undoubted and widely recognized leader in his field.

Many of the industry's top cinematographers rose from the ranks of press photographers, too. Take Joseph Ruttenberg, A.S.C., for instance. Ruttenberg

HOUSTON

Automatic Color
FILM DEVELOPERS



**FOR PROCESSING
ANSCO COLOR FILM**

The Houston Automatic Color Film Developers are designed to process Ansco Color Film to highest professional standards. Four models, for 35mm. and 16mm. film, speeds from 10 to 35 feet per minute. One model equipped with sulphide applicator to produce metallic sound track with quality equivalent to black and white film. Write today for illustrated brochure.

Houston

Automatic Film Developers - Printers - Studio & Laboratory Equipment
THE HOUSTON CORPORATION, W. LOS ANGELES 64, CALIFORNIA
 Tel: BRadshaw 24331 Cable HOUSCORP

ART REEVES' NEW ADDRESS:

**ART REEVES MOTION PICTURE EQUIPMENT
AND CAMERA SUPPLY COMPANY**
 7512 Santa Monica Blvd., Hollywood 46, Calif.

Only Art Reeves Can Sell The New Model

S E N S I T E S T E R

Will Handle Modern Fine Grain Film

began his photographic career as a camera reporter for Hearst's "Boston-American." Joe started with the "American" as a copy boy, then was promoted assistant to the head of the photographic darkroom. He hadn't been on the job long when a big news story broke suddenly. A big excursion steamer had crashed on the rocks down the coast and all the newspaper's cameramen were rushed to the dock to photograph survivors as they landed, and especially to buy up any snapshot films that had been exposed at the scene by surviving excursionists. Joe was left in charge of the darkroom. He tray-developed over 300 rolls of amateur films that night, in addition to the plates sent in by the paper's still men, and made hundreds of prints. As a result of his initiative, he was soon promoted to a full-fledged press photographer.

Ruttenberg spent eight years with the "American," then opened a successful portrait and commercial studio of his own. After a few years at this work, the movie bug began to bite Ruttenberg and he bought an old movie camera with the object of shooting newsreel material. He built his own film developing laboratory and for a year or more he photographed and produced a local newsreel for the Loew theatres in the Boston area. This provided him with a thorough grounding in the fundamentals of motion picture photography, for the project gave him experience in film developing and printing, editing and title making, in addition to photography.

By now, Joe felt he was ready to photograph feature films and headed for New York in quest of a job with one of the eastern studios. After a prolonged period of going from studio to studio, the break he sought finally came when the Fox East Coast Studio summoned him to fill an assistant cameraman's job. He wasn't an assistant long, though, for within a short time the first cameraman resigned from the picture, after an argument with the director, and Joe was asked if he felt he could carry on and finish the picture.

He felt he could, and proved it by finishing the picture in such fine style that from then on he remained a First Cameraman. Years later he moved to Hollywood and was signed by Warner Brothers as director of photography. Winning an Academy Award for his photography of "The Great Waltz," he went on to duplicate the feat with the photography of "Mrs. Miniver," in 1942. He is currently shooting "The Miniver Sequel" in London for M-G-M.

One cannot recall "How Green Was My Valley," "Song Of Bernadette," and "Anna And The King Of Siam," without remembering the impressive photography of each which netted Academy

Awards for the best black and white photography for Arthur Miller, A.S.C. Miller lays no claim to a background of press photography or portraitist. Rather he was a "ham" or advanced amateur with a yen to make snapshots. Early in life he developed two absorbing interests—fine horseflesh, and making pictures photographically. He became a jockey, but wherever he raced he always managed to have an improvised darkroom in one of the stables. In off moments he'd snap pictures of the horses, jockeys, the trainers, and others. Between races he'd develop and sell them—three prints for fifteen cents! It wasn't a profitable venture but it netted enough to enable him to buy more materials and equipment.

Then fate stepped in. An accident occurred that ended his career as a jockey. When he recovered he learned that his stable rented horses to a group of people who made moving pictures. He wangled the assignment of taking horses to the studio for their day's work. He fell in love with the big movie cameras, and made up his mind that one day he'd become a motion picture cameraman. As soon as he'd gotten sufficiently acquainted with Fred Balshofer, the cameraman, he asked for a job and was put to work in the laboratory.

"That was the pathway to a camera job back in 1909," says Miller, "and believe me it put one through a real course in practical photography. I began in the room where they perforated the film, then went up as assistant in the negative developing room. I learned to tone and tint film—a vogue in those days—and how to mix developers for negative and positive film. The next step was the printing room."

When Miller finished his apprenticeship in the lab, there was no such thing as an assistant cameraman. "When you landed a camera job in those days they simply handed you a camera and you went out and did the job," says Miller. One of his earliest and best remembered films was "The Perils Of Pauline"—a serial; and while it was not his first, it was very close to it. Because of the thorough training received in Balshofer's lab and his own inherent instinct for photography, Arthur Miller made good as a cinematographer from the start.

There are others, of course, among the directors of photography of Hollywood, who also were skilled photographers before succumbing to the lure of the movies, and whose early experiences make equally interesting reading. But their stories remain to be told in another article.

PRODUCING FILMS FOR TELEVISION

(Continued from Page 47)

sity occur. This effect is particularly noticeable when the dark areas occur near the lower and right borders of the picture area, and has the same appearance as the flashes of light sometimes seen in projecting processed reversal motion picture film which has been edge-fogged due to bent camera spools. It is difficult to state in simple terms the value of density at which this effect occurs, since it depends somewhat on the arrangement of the subject matter and the extent of shading control introduced by the monitor operator in the transmission of the picture. A statistical study of the problem would no doubt reveal a value for the maximum density, which, on the average, it would not be desirable to exceed. It is reasonably certain, however, that much less of this trouble will occur if the recommendations regarding density range compression are followed. The maximum diffuse density of a motion picture print made on Eastman Fine Grain Release Positive, Type 1302, intended for theater projection seldom exceeds 2.40. If, as recommended above, the density range is compressed by at least 0.3 for the television print, then the maximum diffuse density for the latter would be 2.10 or less. From practical photo-

graphic tests using the reduced lighting contrast recommended below, it is indicated that prints which are satisfactory for television transmission might have a maximum diffuse density (for the deepest shadow) of about 1.6 to 1.7 and a minimum (highlight) density of about 0.07 to 0.15 including fog. These values are for prints made on Eastman Fine Grain Release Positive, Type 1302*, for a Type IIb Sensitometer control gamma of 2.2 to 2.5.

As stated above, the edge-flare effect is much more noticeable when dark areas occur near the lower and right borders of the picture area. Care should therefore be exercised in the design of sets and in the lighting technique to avoid this condition wherever possible. The so-called "effect lighting," often employed for the sake of dramatic emphasis, generally results in these conditions and therefore is not usually desirable.

For those who are familiar with the lighting technique employed in color photography, the lighting of sets for making television films should offer no serious problems since the requirements are very similar. The balancing light used to con-

*Type 5302 for 35mm. Safety Film and Type 7302 for 16mm. Film.

trol contrast, usually referred to as the "fill-light," should give an illumination level having a definite ratio to the "key-light." The "key-light" is that light source used to illuminate the highlight area of the subject of greatest interest and this area is the one on which the exposure is based. Typical lighting set-ups showing the placement of the key-light, fill-lights, and auxiliary-lights in relation to the subject and camera were shown in Figures 1 and 2 on page 12 of the January issue. The ratio of fill-light to key-light illumination may be conveniently measured by means of photoelectric exposure meters, which are equipped to measure *incident* light. Such meters are used at the position of the subject and are pointed at the light source. When measurements are made in this manner the ratio of fill-light to key-light so determined is called the *lighting contrast*. The key-light level should be checked after all fill-lights have been arranged. The ratio should be the same as that used in exposing color reversal films, namely, about 1 to 2, and should seldom exceed 1 to 4.

It should be noted that the term "lighting contrast" is not synonymous with the terms "subject contrast" or "subject brightness range." The true subject contrast or subject brightness range is usually much higher than the lighting contrast, since it takes into account the different reflectances of the various elements of the scene. It can be measured accurately only by means of a flare-free telescopic type brightness photometer, which measures an extremely small area and which allows the instrument to be situated at a sufficient distance so as not to obstruct any light falling on the subject. These instruments, however, are usually only available for research work demanding measurements of the utmost precision. As a practical approach to the problem, it is possible to make reflected light readings of various areas of the scene with exposure meters which are equipped for making reflection measurements. The readings obtained with these meters do not, of course, give a measure of the true subject brightness range because of the greater angular response of the meters and because of the possible creation of shadows in making the measurements. Such reflected light readings are nevertheless very useful in roughly determining whether the various areas of the subject will be correctly rendered by the photographic material. When reflected light measurements of the lightest and darkest areas of greatest interest are made, the ratio will depend not only upon the lighting contrast but also upon the color of the areas measured, upon their reflectances and upon their surface textures. The ratio will vary, therefore,



110 VOLT AC/DC VARIABLE SPEED MOTOR with TACHOMETER

for C. K. Cine Special

Now you can motor drive your Cine Special camera with confidence.

Tachometer is mounted in clear view of operator. Calibrated from 16 frames per second to 64 fps. with definite RED marking for 24 fps.

Electrical governor control for adjusting speeds. Steady operation at ALL speeds. "OFF-ON" switch built into motor base. No adaptors required, except motor-coupling which attaches to camera and couples to motor.

Motor shaft equipped with spring steel drive arm which will shear if camera jam occurs. This drive arm is easily replaced.

Furnished complete with rubber covered cable and plugs.

Write for complete details.

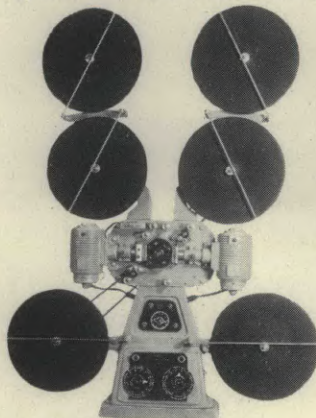
FRANK C. ZUCKER
CAMERA-EQUIPMENT CO.
1600 BROADWAY NEW YORK CITY

UHLER COMBINATION CONTINUOUS PRINTER

FOR PRINTING 16 AND 8MM. FILM

Black and White or Color, Single or Double System Sound.

The film is run through the machine once only while printing single or double sound system at the same time the picture is printed . . . The Uhler printer will equal the work of much more costly printers and is thoroughly tested and guaranteed.



Combination 16 & 8MM.
Continuous Printer

FOR PROFESSIONAL OR AMATEUR
MOVIE MAKERS, LABORATORIES,
SCHOOLS AND TECHNICIANS.

SPECIFICATIONS

Capacity: 1200 feet negative, positive, and sound track.
Printing Speed: Up to 1600 feet per hour.
Registration: Extra large 34 tooth precision cut sprocket gives perfect frame line and prevents weave.
Gears: Extra heavy precision cut for long life.
Bearings: Precision ground shafts running in Oilite or ball bearings.
Lamps: Air cooled by high speed quiet blowers.
Light: Sufficient light to expose fine grain film. 6-8 volt for sound track.
Aperture: Highly polished and precision cut with side pressure on the gate to prevent weave.
Filter Holder: To print color film.
Light Control: Dual semi-automatic, one is set a scene in advance of the other and the light changes automatically as the notched film goes by.
Light Tripper: Life-time points and rolls on the edge of the film and trips on a notch of .020 of an inch deep.
Motor: 1/12 H.P. Constant speed.
Construction: Heavy cast aluminum.
Weight: 72 pounds.

\$76200 including excise tax.

Information is available upon request on 35 to 16MM. continuous, Optical or Effects Step printers, Reduction, and other accessories.

The Uhler printers are designed and built with the utmost precision and care to meet the requirements of the highest quality prints. We have been building printers and sound equipment for over a period of 18 years.

UHLER CINE MACHINE COMPANY

15778 WYOMING AVENUE DETROIT 21, MICHIGAN PHONE: UNIVERSITY 1-4663

— Distributors —

S.O.S. CINEMA SUPPLY CORPORATION, 602 W. 52nd St., New York 19, N.Y.
SUPERIOR BULK FILM CO., 101 South Wells St., Chicago 6, Illinois

for different subjects, but for most subjects it should be less than about 1 to 30 when the lighting contrast has been properly adjusted to a ratio of 1 to 2, and not greater than 1 to 4. If the reflected light reading ratio is greater than 1 to 30, then the lighting contrast should be reduced to bring the former within the proper limits.

In photographing outdoor scenes, the lighting contrast is more difficult to control, but a great deal can be done with the aid of reflectors to reflect light into shadows, thereby reducing the contrast. For this purpose "hard" and "soft" reflectors can be used. Aluminum paint, tin foil, pure white cardboard, and sometimes mirrors are employed. When aluminum paint is used on a smooth surface, it provides a "hard," mirrorlike spot of bright light. When used on a rough surface, it provides "soft" diffuse light.

The exposure should be so adjusted as to obtain a negative silver density (not including base density) for the deepest shadow between approximately 0.1 and 0.25 when the negative material has been developed to the normal gamma of 0.60 to 0.70. With the lighting contrast recommended, this negative will, of course, have a lower density range than a normal motion picture negative and this fact should be kept in mind in making any visual estimates of it.

A variety of film types are available for use in television studio photography. The following materials provide a wide choice in film types, each designed to fulfill the requirements for different situations and characteristics. Technical data on any or all of these materials will be supplied by the Eastman Kodak Company upon request.

35mm. NEGATIVE TYPES

Eastman Background - X Panchromatic Negative Film, Type 1230.

Eastman Plux-X Panchromatic Negative Film, Type 1231.

Eastman Super-XX Panchromatic Negative Film, Type 1232.

16mm. NEGATIVE TYPES

Eastman Panchromatic Negative Safety Film, Type 5240.

Eastman Super-XX Panchromatic Negative Safety Film, Type 5242.

16mm. REVERSAL TYPES

Eastman Plux-X Blue Base Reversal Film, Type 5276.

Eastman Super-XX Blue Base Reversal Film, Type 5277.

Cine-Kodak Super-X Panchromatic Safety Film, Type 5256.

Cine-Kodak Super-XX Panchromatic Safety Film, Type 5261.

16mm. COLOR FILMS

Kodachrome Film, Daylight Type, 5263.

Kodachrome Film, Type A, 5264.

Kodachrome Commercial Film, 5268.

It is not to be inferred that the recommendations contained herein represent the ultimate techniques which will be followed in the future. Instead, they represent the best information which can be given in the present state of flux of a rapidly expanding industry.

camera without blimp and only the lightest of camera tripods. Also, it was impractical to use either booster lights or sunlight reflectors in most of the shots, because of the lack of flat surfaces and the difficulty of bringing a generator up far enough to supply current; and so, probably for the first time since the advent of sound pictures, an outdoor epic was shot almost entirely without benefit of booster light of any kind—no mean challenge in itself, considering we were shooting in color.

Try and visualize shooting on endless rocky terrain without the aid of booms or parallels; where the tripod must be held in place by the weight of members of the camera crew; and where a slip of a tripod leg would send a valuable camera and possibly members of its crew hurtling over a cliff to certain destruction. These were some of our problems every day for fourteen days. Many shots were made with the camera and operator or myself suspended from cables over the side of a cliff. Because it was essential that I line up each shot through the camera, it often proved more practical for me to remain and operate the camera, rather than risk moving it in trading places with the operator.

Many times, because of the nature of the terrain and because of the difficulty in finding a suitable spot to set up the camera, composition had to be sacrificed to some extent and dependance placed on the natural setting and the color separation of the Monopack medium to give us desired pictorial results. One thing I constantly strived for was a genuine "natural" result in the colors, avoiding harsh reds and other extremes. I used no filters at any time other than the regulation 114-A, which is always on the camera, indoors or out, when shooting Monopack.

We had but one day of the fourteen when the atmosphere was clear. The rest presented haze in varying degrees. But with Monopack, haze is no obstacle and in this instance it was a distinct advantage to the photography. I feel that in some of the scenes, it was the haze which created the beautiful pastel tones and genuine deep purple in the mountain shadows late in the day. It was gratifying to have negative reports come back from the laboratory indicating that an entire day's shooting, consisting of from 30 to 40 setups, was okay with respect to negative balance and photography. I mention this because of the necessity for a balanced negative with Monopack—especially when there is a delay of three or four days before the cinematographer can see his pilot strips or view the black and white prints.

To enhance our colors, it became necessary to resort to artificial coloring, both

TOUGH ASSIGNMENT

(Continued from Page 48)

for the spot. There, high on a mountain top, was a scenic vista looking like a page out of a travel folder, and dotted with high boulders. We peered down into a green valley with white ranch houses gleaming in the sun. And in the distance was a shimmering lake to complete the picture. Here was truly a cameraman's dream.

But like the pioneers and explorers of old, we were to discover that there is a price to pay for the privilege of enjoying such an unusual and beautiful spot. As we descended the mountain we contemplated the herculean task that would be involved in getting camera equipment, cast, crew and the herd of horses to the location. We were to experience this task a few weeks later when our first shooting day arrived.

First it became necessary for the studio to build ten miles of graded road to enable use to drive as close to the location site as possible. The road, incidentally, proved beneficial in another way a few days later when an airlines passenger transport crashed in fog near our location site, and enabled fire and

ambulance crews to drive rescue equipment within 150 feet of the crashed plane.

From the "end of the line," as we called the terminus of the makeshift road, it became necessary each day for the crew to haul our camera equipment up over the rugged terrain to the mountain top. For this they used pack mules. Cast and crew hiked to and from the location site daily.

The script called for a series of running inserts with mountainous terrain in the background. There was no semblance of a road on the mountain top, so it became necessary for the studio to build one. For this they required a bulldozer and a tank-truck of road oil for laying the dust. These had to be pushed and pulled up the side of the roadless mountain by means of a giant tractor. After this, the camera car was brought to the top by the same method.

From the very beginning we realized it would be too difficult to work with the huge Technicolor cameras in this locale. So we decided to shoot the entire picture in Monopack, using a Mitchell

in the scenic settings and in the horses used in the scenes. To give a pictorially pleasing green color to the parched grass, the studio sprayed the grass with a vegetable dye, harmless to animals. The studio art department also touched up the rocks to provide a more contrasty background for the Palomino horses. In all, 15,000 gallons of paint were used. To shoot scenes in a nearby canyon, which had been ravaged by fire several months earlier, it became necessary to remove charred brush and to repaint remaining tree stumps their natural color and add branches and green leaves.

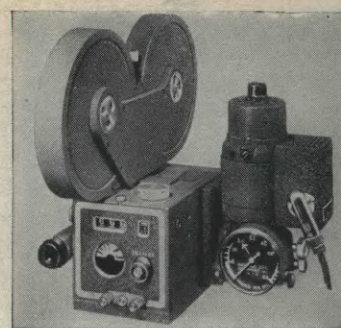
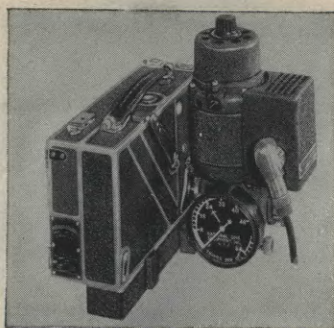
The equine star of the picture—world-famous Palomino, "Harvester"—valued at nearly \$100,000, had both a standin and a double; and the standin and the double also had doubles. The colt, which played a prominent part, also had a standin and a double—and there were doubles for them, too!

Because of the necessity for switching from one animal to another from time to time, we had a special makeup man whose job it was to match color and markings on the horses and colts. The studio hairdressing department provided special dyes to color the horses' manes and tails.

Not a single studio-built interior was used in the picture. Every scene, every take, was staged in a natural locale. The only artificial construction was a rough rail fence erected along the hastily constructed road already described. The only interiors shot were in a barn; and the only artificial light used in making the entire picture was in the barn interiors and a night sequence filmed in front of a ranch house. The rest of the picture was shot in sunlight.

The filming of "The Palomino" marks the first time any motion picture company has worked in this mountain location. Some may ask why background plates weren't used instead of working against such difficulties. But producer Robert Cohn has an answer for this: "It would have been more costly and the results wouldn't have given us the genuine appearance of scenic vistas so essential to the story."

Despite the hardships and obstacles encountered, we surprised the studio by winding up the picture in 14 days and within its budget—a record for a Monopack feature production. It stands as a credit to a fine crew which went to remarkable ends to insure its success. Students of the camera will find it interesting for the color photography and particularly because it was filmed for the most part under conditions similar to those encountered by the non-professional: bright sunlight, a natural locale and no artificial lighting aids. END.



VARIABLE SPEED MOTOR

with TACHOMETER

for

**CINE SPECIAL CAMERA
AND MAURER CAMERA**

- 115 V. Universal Motor — AC-DC
- Variable Speed 8-64 Frames
- Separate Base for Cine Special
- Adapter for Maurer Camera

Interchangeable Motors:

- 12 Volt DC variable Speed 8-64 Frames.
- 115 Volt AC 60 Cycles, Synchronous Motor Single Phase.
- 220 Volt AC 60 Cycle, 3 Phase, Synchronous Motor.



Animation Motors for Cine Special, Maurer and Mitchell Cameras. Motors for Bolex and Filmo. Cameras. Time Lapse Equipment.

National Cine Equipment, Inc.

20 WEST 22nd St.
NEW YORK 10, N.Y.

The MART MESSAGE

Hallen Does It Again!

THE NEW

HALLEN JUNIOR RECORDER

Can only be seen and heard here. The only professional recorder using 17 1/2 mm. perforated film that is absolutely synchronous at such an amazing low price. Also available for 16mm. film to run at 36 ft. per minute. \$895.00

THE HALLEN B-22 RECORDER

Synchronous for 16mm. and 35mm. cameras with a frequency response from 30 to 10,000 cycles, two channel mixer and dialogue equalizer, immediate playback and immediate erase, \$1,850.00

Illuminate your Sets—

THE COLORTAN WAY

Amazing new 750, 2000, and 5000 watt units in compact cases uses ordinary 150 watt bulbs and 15 to 30 amp fuses capturing high intensity professional studio type lighting. Grip equipment with gobo stands, net scrims and flags, indispensable for good lighting control. Send for illustrated booklet.

WANTED

16 and 35mm. Movielas and Cameras.

Headquarters for Motion Picture and Television Production Equipment

SALES SERVICE RENTALS

PRODUCTION EQUIPMENT

MAURER SINGLE SYSTEM camera with 4 lens turret, internal rackover focusing, erect image finder, sunshade & filter holder, 12 volt DC & 110 volt AC motors, 15mm., 1" & 3" lenses, 3-400' mags, amplifier, 2 mikes, tripod, all accessory cases, complete, in excellent condition \$4,250.00

AURICON PRO SINGLE SYSTEM camera Model CM-71, 200' capacity, lens shade & mounting rods, auto-parallax finder, 110 volt AC motor, NR-24 noise reduction amplifier & mixer, mike, phones, cables, batteries, complete, demonstrator model almost brand new \$1,274.00

NEW AURICON CINE-VOICE single system camera for advanced amateurs, 100' capacity, professional type amplifier, mike, phones, carrying case, new \$695.00

KODASCOPE FS-10N 16mm. sound projector, 10" PM speaker in carrying case, 1600' capacity, excellent sound, in like new condition \$225.00

LENSES

16mm. Schneider Xenon f1.9, like new \$85.00

25mm. Switar f1.4 coated, new \$139.00

25mm. T-H Cooke f1.5, like new \$85.00

75mm. Yvar f2.5 coated, new \$95.00

75mm. Baltar f2.3, Mitchell mount \$165.00

CAMART MIKE BOOM — CAMART TRIPOD

CAMART BATTERIES

Send for new 1950 catalogue and Rental List.

Send listing of your used equipment for our liberal trade-in allowance or cash offer.

THE CAMERA • MART, INC.

70 WEST 45TH STREET
NEW YORK 19, N. Y.

WORLD-WIDE SERVICE
CABLE ADDRESS: CAMERAMART

LOOK! BARGAINS!

Filmo Specialist 70-J with 110 volt A.C.-D.C. Sync. motor, 12 volt D.C. Motor, 2-400' mags. Turret optical finder, long & short direct focusing tubes, like new. B.G.H. Shiftover...\$1794.80
Filmo 70-H with f/2.5 Ansix...\$395.00
 Carrying case for above...\$33.00
Filmo 70, Spider turret, direct focus, speeds 8-16-24, 25mm-f/1.4 Switar, 15mm-f/2.8 Yvar, Maier-Hancock finder, spring drive, hand crank, B.M. Matte Box, mattes, filter holder. Professional type, lightweight, heavy duty freehead tripod with zipper case. Special compartment case. Like new...\$575.00
 Above Camera less lenses...\$250.00
Filmo 70-F - Turret with positive turret viewfinders, 7 speeds, hand crank, spring drive adapted for 200' external mag., electric motor. 200' mag., 110 volt A.C.-D.C. motor, 25mm. f/1.5, 50 mm f/3.5, 80mm. T.H.C. f/3.3. Combination carrying case. Perfect...\$749.00
Filmo 70-DA with 25mm. f/1.9 Lumax, carrying case. Like new...\$257.57
Cine Special, chrome finish, new condition. Series 1 with f/1.9 lens...\$535.00
Cine Special, chrome finish, used condition. Series 1, with f/1.9 lens...\$395.00
Cine Kodak 16mm. high speed standard magazine load camera, synchronous motor with gear reduction, counter, less lens for 115 volt A.C. Used condition...\$155.00
 Same as above but only slightly used. for 24 volt D.C. operation...\$132.00
Eymo - 71-Q - 25mm. Baltar f/2.3, 50mm. Eyemax f/2.8, 160mm. Eyemax f/4.5, 400' mag. Like new...\$788.00
 Combination case for same...\$45.00
DeBrie Parvo, all metal, 4, 1000' mags., Prof. Tripod, masks, 35mm. Zeiss f/3.5, 50mm. Pan Tachar f/1.8, 16 1/2 C.M., Carl Zeiss f/2.7, case. Perfect...\$750.00
Arriflex, latest model, new, 32mm. f/2 Tachar, 5cm. f/1.5 Sonnar, 8.5cm. f/2 Sonnar with Mag...\$750.00
Akeley Pancake with 3 lenses, finders, 6 magazines, carrying case, Gyro Tripod...\$549.00
Arriflex, used with 3 fast Pan Tachar lenses, with mag...\$595.00
New Arriflex Magazines \$82.50: Used \$71.50
 1 Arri 16mm. Step Printer, complete...\$950.00
 Synchronous motors for Bolex, Cine Special, Filmo, Eymo, Arriflex: 35mm. with frame-numbering device, single frame attachment and gear reduction...\$165.00
 Installed on Camera, \$39.50 extra.

SYNCHRONIZERS

Neumade-Model M-75D, double hub, 35mm.. footage and frame counter. New in original cartons...\$79.50
 Neumade-Model M-38-S single hub, 35mm.. footage and frame counter...\$72.50

A CHOICE SELECTION OF LENSES

25mm. f/2 Schneider Xenon
 100mm. f/2.3 B.G.L. Baltar
 152mm. f/2.3 B.G.L. Baltar
 12 c.m. f/4.5 Dallmyer
 21 c.m.-f/3.5 Carl Zeiss Jena Tessar
 All coated—All with mounts—with 7 finders—carrying case...\$685.00

MOVIOLAS

Model D - 35mm. silent Moviolas. New \$275.00
 Microscopic frame study attachment, fits any Moviola...\$32.95
 Huge stock cameras, lenses, tripods, lighting equip., magazines, accessories, etc. Ask us for rock bottom quotations on what you need.
 TRADES cheerfully accepted, highest prices paid for equipment. Lists free.

MOGULL'S

Mogull Building
 112-114 West 48th St. New York 19, N.Y.

BAUSCH & LOMB

BALTARS

Perfect Condition

Satisfaction Guaranteed

EYMO MOUNTS

75mm. \$85 100mm. \$110

B & H WALL MOUNTS

75mm. \$80 100mm. \$100

MITCHELL MOUNTS

35mm. \$80

LIBERAL TRADE-IN ALLOWANCE
 High Prices Paid for 35mm. Equipment

BEN ROSENBERG

101 W. 45th Street, • New York 19, N.Y.
 Luxembourg 2-2228

FILMING WILD BIRDS IN 16MM. COLOR

(Continued from Page 54)

Every time we emerged from the blind, and frisked around on these activities, the bird became alarmed anew and remained away for an additional hour or so. We got the impression they viewed us from a safe distance in a nearby tree and reasoned "Ah! I was right! I had an idea there was some two-legged interloper hiding in there! He's got some kind of trap fixed up, but he needn't think I'm going to walk right into it!" At about this point, a happy thought struck us. In the majority of cases, the reason for the disturbances to our shelter was because it had originally been designed to permit the operator to stand up at camera level and also to allow reasonable elbow-room. The framework had been constructed of light material in anticipation of long hikes through bushland or fields. Now, however, we had found means of operating from below and a large hideout was no longer required.

As we glanced down at the sturdy legs of our tripod, it was easy to see that these could be spread wide apart and would provide excellent framework upon which to tightly stretch much smaller pieces of burlap and thus defy the pranks of the wind. We could continue to recline below, watching via the periscope, with the camera starting cord in our hand. Having preset the camera, we disguised it with leaves secured with

scotch tape. At last we had a static object and, better still, a much smaller and less conspicuous one. The method met with complete success, reduced the time necessary to remain on the location by at least 50% and likewise reduced the fatigue to the operator.

The filming of small, wild birds by this or any other "pre-set" method, requires that the framing be such as to leave adequate space on top of the nest and on either side for a good picture without regard to where the bird may alight. This is a detail of which many filmers may be quite ignorant, for the parent bird may alight on either side, just above or in the center of the nest.

If possible, locate the nest well in advance of the time for filming, making a number of visits, during which you tie back a few of the leaves which may obscure light. Never clear away too many at a time and never leave the nest (if it is a tree bird) entirely exposed to the sun, as this may kill the young birds. It is usually best to await the hatching of the young birds before starting to take pictures. The parent birds are always more active and interesting at this period than when sitting on the nest.

Every shot taken by the method we have outlined has been highly satisfactory and, should our film sell when cut and edited, we plan to follow the same method in making another film of similar subject material.

COMPOSITION IN CINE PHOTOGRAPHY

(Continued from Page 52)

composition which some find difficult to control, because it naturally seems to find its way to the center of the composition. This, however, should be avoided because the result is too pat, and lacks drama. In general it is better to let the horizon line fall about at the lower third of the screen, favoring the sky with the bulk of the compositional area. In special cases (where there is a great deal of foreground action) it is effective to frame the horizon line so that it falls at the upper third of the screen.

It is an axiom of design that diagonal lines are more forceful and more pleasing to the eye than straight vertical or horizontal lines. This principle holds true also in motion picture composition. For this reason it is well to avoid unimaginative straight-on angles of buildings, signs, and similar straight line subjects.

It is much more effective to shoot such subjects from one side or the other so that the lines form diagonals across the screen. Not only is this better composition, but it is more dramatic. Such a scene shot with a wide angle lens from a low camera vantage point will be especially effective.

The S curve is a compositional element that is as old as Art itself. From the most primitive cave pictographs down to the most modern advertising art, this line appears again and again. On the screen the S curve is no less effective, especially in long shots or landscape backgrounds. A winding river or road curve in the shape of an S will form a perfect compositional motif for a scene. Carrying the principle a bit further, the S curve can often be introduced into the design of interior sets. Remember that

A FEW SPECIALS FROM THE \$250,000 STOCK of the Film Industry's ONE STOP STORE

Since 1926 S.O.S. has supplied leading film producers with Studio, Cutting Room and Lab equipment. **IN STOCK**—Cameras, Lenses, Booms, Blimps, Dollies, Moviolas, Recorders, Printers, Background Projectors, Processors, etc. **UNDER ONE ROOF.**

MR Solar Spots 2 KW Jr. with bulb, barn-doors, diffusers	\$ 87.50
2 KW Jr. with rolling stand, \$104.50; 5 KW Sr. with rolling stand	189.50
Complete 35mm. Background Process Projection outfit, rebuilt	4995.00
Eyemo Q, 6 lenses, motor, etc., good.....	1095.00
Neumade 16/35mm. Automatic film cleaners, new	195.00
Cine Balowstar 1 1/2" f1.3 lenses, new.....	199.00
Art Reeves 35mm. Galvanometer, rebuilt.....	375.00
Cine Voice single system, 16mm. camera, new	695.00
Bridgamatic 16mm. developing machines, new	1595.00
16mm. Projection Screen Moviolas, new.....	300.00

**FREE
for the
Asking!**



—listing over a thousand "BETTER BUYS" in new and rebuilt Film Production Equipment. **All fully guaranteed.** The largest illustrated catalog of its kind in the industry—88 pages of better buys — it will save many dollars.

S.O.S. CINEMA SUPPLY CORP. Dept. Fd.
602 W. 52nd St., New York 19

the eye tends to be led along this curve, so it is better to have the curve lead toward the focal point of action whenever possible. The S curve can also be used most effectively in the grouping of players within the scene—especially in mass ensemble shots. In such a case the arrangement should not be too precise or it will appear artificial on the screen.

In the more academic discussions of screen composition the term *juxtaposition* crops up repeatedly. Used in this sense it refers to two consecutive scenes differing in meaning, but similar in compositional form. For example, an effective transition between two sequences might be achieved by dissolving from a close-up of a spinning automobile wheel to a closeup of a spinning roulette wheel. In this case the similar compositional pattern provides an extra link between these two scenes. Juxtaposition tends to become arty if it is thrown into the script merely for effect. Its use should be restricted to instances in which it can definitely add to the value of a transition or montage.

Close-ups of faces present their own compositional problems on the screen. The easiest way to shoot them, of course, is to set up a straight camera angle with the face centered on the screen. Rather than relying on this undramatic approach, however, it is often better to frame the face to one side, letting another element of the scene balance the composition. If the face is portrayed as looking in a definite right or left direction more space should be left on the side towards which it is looking. Extreme close-ups, in which just a segment of the face appears, will be more effective if either the face or the camera is slightly tilted.

The matter of balance is as important on the screen as in any other type of

SALES • SERVICE • RENTALS

— 35 mm. • 16 mm. —

CAMERAS • MOVIOLAS • DOLLYS

Complete Line of Equipment for Production Available for Rental

Mitchell: Standard - Hi-Speed - NC - BNC - 16 mm.

Bell & Howell: Standard - Shiftover - Eyemos

Maurer: 16 mm. Cameras

Moviola: Editing Machines - Synchronizers

SPECIALISTS IN ALL TYPES OF CAMERA REPAIR WORK. LENSES MOUNTED



NOW AVAILABLE!

- 35mm. Variable Area Film Recording Equipment.
- 35mm. Re-recorders.
- Interlock Systems.
- Studio Mixer Consoles.
- Portable Converters.
- 35 mm. Double Film Magazines and Loop Attachments.

QUALITY FILM RECORDING
EQUIPMENT SINCE 1930

BLUE SEAL SOUND DEVICES

536 E. 85th St., New York 28, N.Y.

Cable Address: **SOUNDFILM**

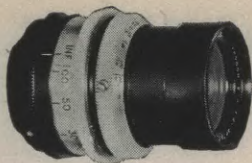
**16 MM and 8 MM
DUPLICATES**
8 MM COPIES
OF 16 MM
16 MM COPIES
OF 8 MM
COLOR AND BLACK & WHITE

**16 MM SOUND
RECORDING**
and other services
to 16mm producers
**35 MM SLIDE and
FILM STRIP SERVICE**

**16 MM
and
8 MM**
*Motion
Picture
Service*

WRITE
FOR
PRICES
DEPT. A

GEO. W. COLBURN LABORATORY, Inc.
164 N. WACKER DRIVE, CHICAGO 6, ILL.



U. S. Pat. No. 2260368

GOERZ AMERICAN APOGOR

F:2.3

**the movie lens with microscopic
definition successful cameramen
have been waiting for—**

● A new six element high quality lens for the 16 and 35mm. film camera. Corrected for all aberration at full opening, giving highest definition in black-&-white and color. Made by skilled technicians with many years of optical training.

● Fitted to precision focusing mount which moves the lens smoothly without rotating elements or shifting image.

● This lens comes in C mount for 16mm. cameras. Fitting to other cameras upon special order.

● Sizes available now: 35 and 50mm. uncoated and 75mm. coated.

Write for prices, giving your dealer's name.

**The C.P. GOERZ AMERICAN
OPTICAL COMPANY**

Office and Factory

317 EAST 34 ST., NEW YORK 16, N. Y.
AC-2

AKELEY CAMERA AND INSTRUMENT CORP.

175 Varick Street

New York 14, New York

— Established 1914 —

Designers and manufacturers of silent and sound motion picture cameras with 225° shutter opening, (288° shutter opening for television use), gyro tripods and precision instruments. Complete engineering and machine shop facilities for experimental work, model and production runs.

INQUIRIES INVITED

BACK ISSUES

of The American Cinematographer are available for most months of 1948 and 1949. Many earlier issues also available. All contain valuable technical articles and information relative to contemporary motion picture photography. The December issues contain an annual index as a guide to content of each year's 12 issues. Price of back issues: In U. S., 30c; Foreign, 40c.

THE AMERICAN CINEMATOGRAHER
1782 N. Orange Dr., Hollywood 28, Calif.

composition, and it can be achieved by balancing players with other players or with static elements of the set itself. Very often, when these elements do not lend themselves well to balanced composition, masses of light or shadow can be used most effectively to complete the balance of the pattern.

We have spoken of juxtaposition as meaning a similarity in compositional pattern between consecutive scenes. Turning this principle around we come to the theory of opposing compositions in consecutive scenes, a device which can be quite dramatic. The drama is obvious when one visualizes two armies marching toward each other, and shot from opposite angles. Properly intercut there is a natural conflict between the two patterns of action. However, even static objects can be made to oppose each other through the proper choice of angles and cutting.

Since composition for the screen is a fluid thing, it is quite permissible (and often most effective) to change not only the compositional pattern but the image size within the scene. This is done either by moving the camera toward or away from the subject or allowing the subject to approach or move away from the camera. In this way, variety and dramatic emphasis can be achieved without the necessity of cutting—thus permitting a fluid continuity from one composition to the other.

The framing of scenes with foreground objects is not a new principle of screen composition, but it is a most effective device and one which is rarely used to fullest advantage by the cinematographer. Besides providing an extra compositional element with which to work, the foreground object ties the main subject more closely to its surroundings and also adds depth to the scene.

The wide-angle lens is the best friend of the cameraman who wishes to achieve more dramatic compositions. It is naturally a dramatic lens since its main characteristic is a foreshortening of the scene. Distances can be exaggerated as can the size and special relationships of various objects within the scene. Diagonal lines can be made to converge dramatically, and it is also possible to produce striking compositions in which a foreground object looms prominently before a significant subject in the background.

The choice of camera angle is most important in achieving forceful composition. The low angle (especially when shot with the wide-angle lens) tends to exaggerate the height of the subject, making it seem to loom into the composition. Thus it is especially effective in the dramatic or mystery type of film. In contrast, the high angle tends to minimize the size and importance of the

subject, giving the audience an emphatic sense of superiority as it looks down upon the scene.

Tilted camera angles definitely have their place in the modern motion picture, especially in montage sequences and sequences which subjectively duplicate the point of view of one of the players. However, like all unusual techniques, it is a device which can be easily misused, and the cameraman should guard against throwing in such weird angles unless they are properly motivated.

Composition for the screen is a technique unto itself. While an art background is a handy essential toward producing more effective visual patterns, it is not absolutely necessary. The 8mm. or 16mm. cameraman with a flair for screen presentation can learn much by observing composition within the professional product, by trying out various approaches to sequences in his own filming, and by leaving his mind open to original and experimental techniques of filming.

MOBILE GENERATOR

(Continued from Page 49)

design and construction of this new equipment.

So perfectly insulated is the trailer, it can operate close to the scene of shooting without danger of sound recording equipment picking up interference. Sound-proofing consists of ¼" of 3M underseal, sprayed on; two inches of fibre glass; 5/8" plywood, and 1¼" perforated Celotex. The motor generator set is mounted on rubber pads to dampen vibration. The M.G. housing is so constructed it can be readily removed in event there is need to make adjustments or repairs.

Ample circulation of air cools the interior of this well-insulated motor room. A five horsepower motor driving a double inlet blower delivers 11,000 cubic feet per minute, draws outside air from each side of the trailer, forcing it up under each machine and thence to exhaust ports at the top and rear of the trailer. Two-inch Air-Maze filters cleanse the air at point of intake.

Safety to operating personnel was a paramount factor in the design and construction of the equipment. All doors are equipped with locks and all high-voltage compartment doors are interlocked with the control circuit in such a way that it is impossible to start the M.G. set if any doors are left open or unlocked. The set will automatically stop generating should any of the compartment doors be opened while the generator is running.

Proving that no matter where you are in the world—in the Arctic wastes or deep in the Belgian Congo—your copy of **AMERICAN CINEMATOGRAPHER** will always reach you, is a letter received recently from cinematographer Henry Goldstein, attached to the Information Service, Belgian Congo. He wrote:

"I'm on location taking shots in the jungle, some 20,000 feet of film and 800 stills—quite a job here in the hot weather. Yesterday I received the September issue of *American Cinematographer*. A native travelled all day to bring it to me. It is the most interesting of all magazines in the motion picture industry."

The motor generator set is designed for operation on alternating current of 2300, 4000, and 4600 volts and 50-60 cycles. The motor is reduced-voltage started, through a starting reactor, by means of high-voltage air contactors. This limits the inrush current to 200% of full load current. Starting time is 18 seconds at normal voltage.

Every modern method has been employed to insure protection of equipment. Thermal overload relays, connected in the control circuit and energized from current transformers connected in each of the six phase windings, protect the motor. Disney engineers explain that the advantage of using six current transformers is that the current remains equal in each phase group, regardless which of the three line voltages (2300, 4000, or 4600) is used in operating the motor. This eliminates necessity of having to change overload connections for operation on different voltages.

Each bearing on the M.G. set has a thermal relay, the contacts of which are connected to the safety control circuit and shuts the plant down in the event bearing temperatures reach the danger point. At the same time, a red warning light located on the control panel indicates which bearing is in danger.

The plant is equipped with five main fuses. These are used for phase reversal as well as equipment protection. The fuses are mechanically interlocked so only three can be closed at the same time. To insure correct rotation of the M.G. set, a reverse-phase relay was installed and connected in the control circuit so as to leave the control circuit inoperative unless the phase rotation is correct. Also, a ready-light located on the control panel indicates correct phase rotation.

The control circuit and the blower motor are fed from a special three-phase, air-cooled transformer with taps on the secondary and connected to selector relays which automatically select the proper tap to insure 230 volts for the control circuit and blower motor, regardless which high line voltage is used. The D.C. breaker is an electrically-operated air breaker with time delay and

C. ROSS

FOR

LIGHTING EQUIPMENT

Inkie and Arc Lamps including Required Accessories
Generators—Cables—Boards—Boxes

•

Raby Camera Crane—Dollies—Blimps—Geared Heads

•

GRIP EQUIPMENT

FOR LOCATION AND STUDIO

Parallels—Steps—Platform Ladders
Century Stands—Reflectors—Flags—Scrimms

•

SOLE EASTERN MOLE-RICHARDSON CO. DISTRIBUTOR

RENTALS • SALES • SERVICE

•

CHARLES ROSS, Inc.

333 WEST 52nd STREET

NEW YORK 19, N.Y. Circle 6-5470-1

TRANSMISSION "T" Stop Calibration

DESIGNING and MANUFACTURING of
Specialized lens mountings and equipment for 16mm & 35mm cameras

Animation Equipment

MOTORS for Cine Special, Maurer and Bolex Cameras

LENS COATING

John Clemens — Erwin Harwood

NATIONAL CINE EQUIPMENT

I N C .
20 WEST 22nd ST., NEW YORK 10, N.Y.

RENTALS — SALES — SERVICE

Eyemo, Mitchell, Bell & Howell, Wall, Cine Special Cameras

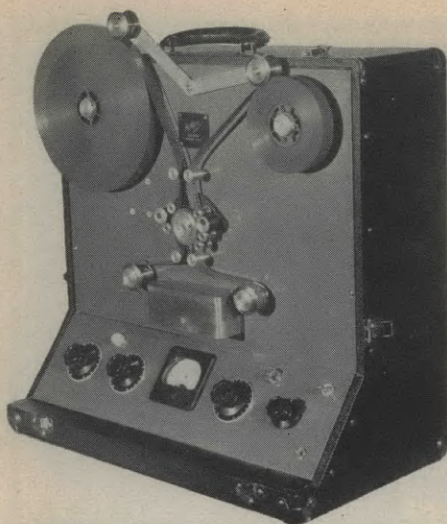
Bausch & Lomb "Baltar" lenses and others for Motion Picture Cameras

instantaneous overload trips, and cannot be closed until the M.G. set is up to normal speed. The hold-in coils on the larger contactors and breaker are operated on direct current, eliminating S.C. hum, and are fed from rectox units associated with the control circuit. All breakers, contactors and transformers are of the air type, eliminating the use of oil. Temperature detector coils are imbedded in the stationary windings of the two generators and motor, and are connected through selector switches to a temperature meter located on the control panel so the operator can read the temperature of the windings at all time.

The motor generating unit is entirely electrical controlled and all operations

are regulated from the control compartment. "Start" and "Stop" switches for the M.G. set, blower motor, and the "Open" and "Closed" switches for the D.C. breaker are mounted on front of the control panel with indicator lights associated with each switch. The control compartment is located inside the trailer housing, in the front end. There is ample accommodation for the operator inside the compartment, and he is thus able to control the huge generator protected from the weather and against the danger of contact with high voltages.

Disney engineers are agreed that the unit represents a notable advance in the factors of safety and efficiency in studio mobile generators. END.



Hallen Jr. SYNCHRONOUS MAGNETIC RECORDER

Designed for light weight
and economy.

Your choice: for use with 16mm. or
17½mm. magnetic film.

\$895.00

Hallen

CORPORATION

3503 W. OLIVE • BURBANK, CALIF.

The American Cinematographer

is on sale at camera stores and newsstands the world over. If you frequently find the supply sold out, why not subscribe by mail and make sure you'll receive your personal copy regularly each month? Twelve issues by mail in the U. S., possessions, and Pan-Amer. Union, \$3.00 yr.; Canada, \$3.00; Foreign, \$4.00. Send check or money order to

AMERICAN CINEMATOGRAPHER

1782 No. Orange Dr. Hollywood 28, Calif.

RUBY CAMERA EXCHANGE

Rents . . Sells . . Exchanges

Everything You Need for the PRODUCTION & PROJECTION

of Motion Pictures provided
by a Veteran Organization
of Specialists

35 mm. 16 mm.

Television

IN BUSINESS SINCE 1910

729 Seventh Ave., New York 19, N.Y.

Cable Address: RUBYCAM

Current Assignments of A.S.C. Members



Major film productions on which members of the American Society of Cinematographers were engaged as directors of photography during the past month.

Columbia

• BURNETT GUFFEY, "One Way Out," with Glenn Ford, Broderick Crawford and Carl Benton Reid. Henry Levin, director.

Eagle-Lion

• W. HOWARD GREENE, "Deadfall," (LeMay-Templeton Prod.) with John Barrymore, Jr., Chill Wills, Lois Butler and Basil Ruysdael. Alan LeMay, director.

• LIONEL LINDON, "The Sun Sets At Dawn," (Sloan-Rathvon Prod.) with Sally Parr, Philip Shawn, Walter Reed and Lee Fredericks. Paul Sloane, director.

Lippert

• BENJAMIN KLINE, "Operation Haylift," with Tom Brown and Russell Hayden. William Berke, director.

M-G-M

• JOSEPH RUTTENBERG, "The Miniver sequel (In Color—shooting in England), with Greer Garson, Walter Pidgeon, John Hodiak and Cathy O'Donnell. Henry Potter, director.

• ROBERT SURTEES, "King Solomon's Mines," (Technicolor) (Shooting in Belgian Congo) with Deborah Kerr, Stuart Granger and Richard Carlson. Compton Bennet, director.

• ROBERT PLANCK, "Summer Stock," (Technicolor) with Judy Garland, Gene Kelly, Gloria DeHaven, Phil Silvers, and Eddie Bracken. Charles Walters, director.

• HARRY JACKSON, "Three Little Words," (Technicolor) with Fred Astair, Red Skelton, Vera Ellen, Arlene Dahl, and Keenan Wynn. Richard Thorpe, director.

• WILLIAM SKALL, "Kim," (Technicolor—Shooting in India) with Errol Flynn, Dean Stockwell and Paul Lukas. Victor Saville, director.

• WILLIAM SNYDER, "The Toast Of New Orleans," (Technicolor) with Kathryn Grayson, Mario Lanza, David Niven, James Mitchell. Norman Taurog, director.

• PAUL VOGEL, "Visa," with Hedy Lamarr, John Hodiak, James Whitmore and George Macready. Joseph Lewis, director.

• RAY JUNE, "Crisis," with Cary Grant, Jose Ferrer, Paula Raymond, Signe Hasso, Ramon Navarro, Antonio

Moreno. Richard Brooks, director.

• JOHN ALTON, "Father of the Bride," with Spencer Tracy, Joan Bennett, Elizabeth Taylor, Don Taylor, Billie Burke, and Leo G. Carroll. Vincent Minnelli, director.

Monogram

• HARRY NEUMANN, "Border Renegades," with Johnny Mac Brown. William Fox, director.

• WILLIAM SICKNER, "Square Dance Katy," with Vera Vague, Jimmie Davis, Phil Britto, Virginia Welles. Jean Yarbrough, director.

Paramount

• WILLIAM MELLOR, "A Place In The Sun," with Elizabeth Taylor, Montgomery Clift, and Shelly Winters. George Stevens, director.

• DANIEL FAPP, "Union Station," with William Holden, Barry Fitzgerald, Nancy Olson and Jan Sterling. Rudolph Mate, director.

R.K.O.

• HARRY STRADLING, "Edge of Doom," (Samuel Goldwyn Prod.) with Dana Andrews, Farley Granger, Joan Evans, Robert Keith, Paul Stewart, Adele Jergens, and Harold Vermilyea. Mark Robson, director.

• JOSEPH WALKER, "Come Share My Love," with Irene Dunne, Fred MacMurray, Andy Devine, William Demarest, Gigi Perreau and Natalie Wood. George Marshall, director.

• WINTON HOCH, "Jet Pilot," (Technicolor) with John Wayne, Janet Leigh, J. C. Flippen, Paul Fix and Richard Rober. Josef von Sternberg, director.

• HARRY WILD, "Sons Of The Musketeers," (Technicolor) with Cornel Wilde, Maureen O'Hara, Alan Hale, Jr., Nancy Gates. Lewis Allen, director.

• NICK MUSURACA, "White Rose For Julie," (Westwood Prod.) with Robert Mitchum and Faith Domergue. John Farrow, director.

• GUY ROE, "Code 3," with Charles McGraw, Adele Jergens, William Talman, Steve Brody and Douglas Fowley. Richard Fleischer, director.

20th Century-Fox

• ARTHUR E. ARLING, "My Blue Heaven," with Betty Grable, Dan Dailley, David Wayne and Jane Wyatt. Henry Koster, director.

• **JOE MACDONALD**, "Outbreak," with Richard Widmark, Paul Douglas, Barbara Bel Geddes. Elia Kazan, director.
 • **LESTER WHITE**, "Dark Challenge," (Thor Prod.) with Mickey Rooney, Beverly Tyler and Pat O'Brien. Tay Garnett, director.

• **MILTON KRASNER**, "Rawhide," with Tyrone Power, Susan Hayward, Hugh Marlow, Dean Jagger and Edgar Buchanan. Henry Hathaway, director.

• **JOSEPH LASHELLE**, "Where The Sidewalk Ends," with Dana Andrews, Gene Tierney and Gary Merrill.

Universal-International

• **MAURY GERTZMAN**, "Death On A Side Street," with James Mason, Marta Toren, Dan Duryea, Rudolfo Acosta,

Margarito Luan, Emma Roldan. Hugo Fregonese, director.

• **RUSSELL METTY**, "Rose Queen," re-titled "Peggy," (Technicolor) with Diana Lynn, Charles Coburn, Charlotte Greenwood, Barbara Lawrence, Charles Drake. Frederick de Cordova, director.

Warner Brothers

• **KARL FREUND**, "Bright Leaf," with Gary Cooper, Jack Carson, Loran Bacall, Patricia Neal, Donald Crisp and Jeff Corey. Michael Curtiz, director.

• **CARL GUTHRIE**, "Storm Center," with Ginger Rogers, Ronald Reagan and Doris Day. Stuart Heisler, director.

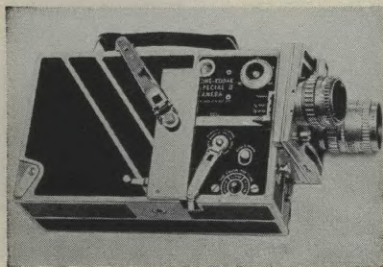
• **PEVERELL MARLEY**, "Pretty Baby," with Dennis Morgan, Zachary Scott, Betsy Drake and Edmund Gwenn. Bretna Windust, director.

WHAT'S NEW

in equipment, accessories, service

Dissolver Price Reduced

Interesting news for owners of Cine Kodak Special cameras is announcement of Joseph Yolo, 5968 Santa Monica Blvd., Hollywood, that effective Febru-



ary 1st, price of the Yolo Automatic Dissolve attachment for this camera will be reduced from \$54.00 to \$48.00. Device makes possible smooth, professional-like fades of equal length in making dissolves with camera.

New B&H Lenses for 16mm.

Bell & Howell Company announces a new series of seven lenses for 16mm. cameras, of which four are ready for delivery. Series is first with uniform-step magnification, extremely high correction, new focal lengths. T-Stops, and new design are other characteristics. Complete description and price of lenses may be had by writing the company at 7100 McCormick Rd., Chicago 45, Ill.

Splicer Heater

Splicers of Griswold, Bell & Howell, Ampro and the rubber-based Hollywood splicers may be converted to professional-type splicers by the addition of the Ariel Splicer Heater, easily attached to any of the above mentioned units. Heater

operates on 90 to 120 volts AC. Heat control is automatic. Price for Griswold model is \$8.75 and \$8.25 for others—prepaid. Product is sold and guaranteed by Ariel Visual Distributing Organization, 156 N. Larchmont Blvd., Los Angeles 4, Calif.

New 'Mart Message' Available

The Camera Mart, Inc., 70 W. 45th St., New York, announces the 1950 edition of its popular 'Mart Message' equipment catalogue ready for distribution. Copies are mailed free on request. The Camera Mart also points out it now has available for demonstration in its showrooms, the Hallen magnetic film recorders and the new Auricon 'Cine Voice' 16mm. sound camera.

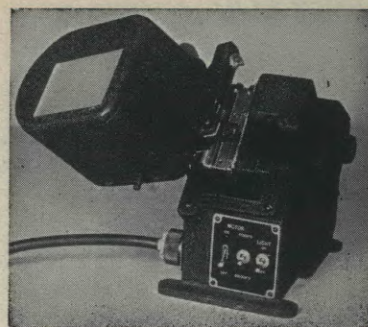
Kinevox Amplifier-Mixer

Kinevox, Inc., 4000 Riverside Dr., Burbank, Calif., announce the addition to its line of magnetic recording equipment of a new 4-position amplifier-mixer as companion equipment to the Kinevox synchronous magnetic film recorder and the Kinevox film phonograph or dubber. Data sheet giving complete details may be had by writing to the manufacturer.

New Kodak Booklet

To assist photographers in keeping color films properly, both before and after exposure, Eastman Kodak Co. has just issued a new booklet, "Storage And Care Of Kodak Color Films." Free copies may be obtained by writing the Sales Service Division, Eastman Kodak Co., Rochester 4, N. Y.

NEW 16MM. EDITOR



MOVIOLA MODEL KP

Write for complete catalogue of 16mm. and 35mm. picture and sound Editing Equipment.

MOVIOLA MANUFACTURING CO.
1451 Gordon St., Hollywood 28, Calif.

Add SOUND

TO YOUR
SILENT FILMS
(Music • Narration • Special Effects)

LET us convert your 16 mm picture to a sound film of the highest quality. Skilled technical staff, and finest sound recording equipment and studio facilities to serve industrial, amateur and educational film producers. Write TELEFILM, Inc., Dept. A-11, 6039 Hollywood Blvd., Hollywood 28, Calif. for prices and literature.

OUR SERVICE IS USED BY:
 • U.S. Navy • Lockheed Aircraft Co. • Douglas Aircraft Co. • Food Mach'y Corp. • U.S. Dept. of Int. • Santa Fe Ry. • Standard Oil Co.

TELEFILM

HOLLYWOOD

Fast Permanent Hot Splices on Your Splicer with Ariel Splicer Heater

Griswold 35mm.	\$8.75
Griswold 16mm. Jr. or Pro R3.....	\$8.75
Bell & Howell	\$8.25
Ampro	\$8.25
Hollywood (rubber base model).....	\$8.25

Add sales tax in California
Postpaid in U.S.A.
No C.O.D.

- ✓ Ready to Attach
- ✓ No Holes to Drill
- ✓ 90 - 120V AC
- ✓ Controlled Heat
- ✓ Guaranteed

ARIEL Visual Distributing Organization
(156 No. Larchmont)

Box 2088 • Hollywood 28 • California

A. S. C. CINEMATOGRAPHIC ANNUAL

Printed and published in 1930, a limited number of the original editions of this valuable technical book are available to cinematographers, movie amateurs, schools and public libraries.

No other book ever written contains so much data supplied by the professionals of Hollywood's motion picture studios.

\$3.50 Postpaid

AMERICAN CINEMATOGRAPHER
1782 N. Orange Dr., Hollywood 28, Calif.

Classified Advertising

RATES: Ten cents per word—minimum ad \$1.00. Ads set in all capital letters, 60c per agate line (12 agate lines per inch). No discounts on classified advertising. Send copy to editorial office, 1782 N. Orange Dr., Hollywood 28, California.

FOR SALE

35MM. INTERMITTENTS—now only \$75.00 each—precision machining, excellent design. Perfect for Printers, Animation Cameras, Slide Film Cameras, and for silencing and modernizing motion picture cameras. Double pull-down claws and double registration pins, at aperture. Entire unit in light-tight metal case to accommodate 200-foot roll, complete with take-up. Light trap at aperture. Original cost \$1,000.00.

A F P

1600 BROADWAY - - SUITE 1004
New York 19, N. Y.

WE BUY, SELL AND RENT PROFESSIONAL AND 16mm. EQUIPMENT, NEW AND USED. WE ARE DISTRIBUTORS FOR ALL LEADING MANUFACTURERS. RUBY CAMERA EXCHANGE, 729 Seventh Ave., New York City. Established since 1910.

TOP QUALITY CINE LENSES—The world's largest selection of fine cine lenses (Zeiss, Cooke, Astro, Bausch & Lomb, Goerz and many others) available on 15 day trial - High Speed, Wide Angle, Telephoto - In focusing mounts coated to fit - Eyemo, Bell & Howell Professional, Mitchell 35 and 16, Maurer.

SPECIAL EYEMO CAMERAS—Rebuilt factory inspected; magazine and motor adaption.

EYEMO ACCESSORIES AND PROFESSIONAL CINE EQUIPMENT—Eyemo Magazines, developing outfits, printers.

FREE CATALOG: full description and prices.

Send this ad to **BURKE & JAMES, INC.**

321 So. Wabash Ave. Chicago, Ill., U.S.A.
Att: A. Caldwell

BOLEX H-16 WITH RACK-OVER focusing. 16 X Magnifier, variable speed 24V Motor, 400 ft. Mag. and Case. Sold separately or with professional Jr. Tripod, lenses, Sync Motor, Battery, Inverter, Charger and other accessories. Write for complete list. CAMERA MART, INC., 1614 No. Cahuenga, Hollywood 28, Calif. HEmpstead 7373.

WE Buy, Sell, Trade Cameras, Projectors, Laboratory and Cutting Room Equipment, 8-16-35mm. We pay highest prices. Carry one of the most diversified stocks in America. Mogull's Camera & Film Exchange, 112-114 W. 48th St., New York 19, N. Y.

BASS SAYS:

"Ah, make the most of what we yet may spend
And spend it on a good camera from Bass."

16mm. B. & H. 70D, 20mm. F:2.9 coated,
1" Plasmal F:1.5 wide angle, 2" Cooke
F:3.5 Case\$235.00

Bolex H-16, Plasmal F:1.5, 1" fixed focus
and wide angle attachment, 3" Trioplan
F:2.8 coated, Comb. Case.....\$245.00

200 ft. Magazine for Cine Kodak Special,
black, factory new\$275.00

35mm. Askania, 35 mm. Pantachar F:1.8,
4" Primoplan F:1.9, 32 cm. Tele-Tessar
F:6.3, 24 volt motor, 3 cassettes, Case.....\$575.00

35mm. B. & H. Eyemo Compact Turret,
47mm. Cooke F:2.5, 4" Cooke deep field
Speed Panchro F:2.5 coated, 6" Cooke
F:4.5, Case\$875.00

BASS CAMERA COMPANY

Dept. AC, 179 W. Madison St., Chicago 2, Ill.

FOR SALE

NEW SURPLUS 35MM. 200' Akeley film chambers, adaptable to B & H Eyemo and 16mm. All metal \$8.95 p.p. Box 1069, AMERICAN CINEMATOGRAPHER.

AURICON SINGLE SYSTEM sound camera Mod-CT 70, new high fidelity E-6 microphone, portable power supply, extra battery, tripod. Y shaped dolly. NATIONAL TELEVISION GUILD, 801 Greenwich Street, New York 14, N.Y.

Houston 35mm. Developing Machine. Suitable for negative and positive. Nearly new condition. Set of 16mm. rollers for converting machine to 16mm. available. Cost \$15,000.00 new. Will sell for \$3,000.00. For further details, Write or Wire. Jim Bradford, 230 W. Olive, Burbank, Calif. Phone CHarleston 8-4338.

BLUE SEAL - 35mm. Portable Recording Equipment, Galvanometer, 1000 ft. mag. amplifier, etc., complete, factory new; original cost was \$6,750.00.

MOLE-RICHARDSON SPOTLIGHTS - Types 406, 410, 414, complete with stands and accessories; list price \$6,000.00 in original factory cases—located in Hollywood.

Both items are offered at sacrifice prices. Write for details and quotations. TECA CORPORATION, 220 West 42nd Street, New York 18, N.Y. Phone WI 7-5644.

MOVIE CAMERAMEN: B&H movie 35mm. standard camera model B, brand new (Factory Rebuilt) with 4 lenses; 40mm. f3.5 Goerz Hypar; 50mm. f2.5 Taylor Hobson Cooke Kinie; 150mm. f4.5 Zeiss Tessar, and 35mm. lens with BRAND NEW UNIT I SHUTTLE and ULTRA SPEED MECHANISM. Intermittent movement with fixed pin and high speed pawl. Inverted view finder. 170° shutter hand. Automatic dissolves. All features for complete motion pictures operation under all conditions. LESS THAN HALF PRICE. Write Box 1068, AMERICAN CINEMATOGRAPHER.

One Shot (3 Strip) 35mm. Motion Picture Camera. Cost \$30,000.00. Will sacrifice for \$6,000.00. For further information, Write or Wire. Jim Bradford, 230 W. Olive, Burbank, Calif. Phone CHarleston 8-4338.

35MM. Model U-D-S Sound Moviola. In Good Optical and Mechanical Condition.....\$790.00

M.G.M. Camera Rolambulator Dolly. Precision, Ball Bearing, Pan and Tilt, Weight 700 lbs. Cost \$6,000.00. Special\$1,250.00

35MM. Bell & Howell Single System Sound. News Reel Type Camera, Four Quality Speed Lenses, Variable Density, Auricon Galvanometer and Amplifier, Two 1000-Ft. Magazines, Freehead Tripod. Complete Ready-to-Operate\$3,500.00

16MM. Auricon Sound Camera, Single and Double System Recordings. Outfit Complete, New Guarantee\$2,295.00

Animation Stand, Suitable for 35MM. or 16MM. Steel Construction, Precision Machine. Weight 1500 lbs.\$1,500.00

35MM. Used Cameras: Eyemos, Arriflex, DeBrie, Universal, DeVry, Pathe; and Camera Lenses, Viewfinders. Also 16MM. Cameras: Cine Specials, Filmos, Bolex, Motors, Tripods, Etc.

BUY NOW,

SAVE ON OUR 20TH ANNIVERSARY SALE

HOLLYWOOD CAMERA EXCHANGE

1600 Cahuenga Blvd. Hollywood

Cable: HOCAMEX

LABORATORY & SOUND

SOUND RECORDING at a reasonable cost. High Fidelity 16 or 35. Quality guaranteed. Complete studio and laboratory services. Color printing and lacquer coating. ESCAR MOTION PICTURE SERVICE, INC., 7315 Carnegie Avenue, Cleveland 3, Ohio. Phone ENdicott 2707.

CAMERA & SOUND MEN

SERVICE TO PRODUCERS

Mitchell 16mm. Professional camera equipped with 1200 foot film magazines for continuous filming, available for rent with operator to 16mm. producers. Write for rates.

Walter Porep
Sportsreel Productions
1114 Carleton St.
Berkeley, California

PROVE THESE CLAIMS—Try Before You Buy—Cine Balowstar f1.3 fabulously fast lens takes everything visible. This "Owl Eye" of lenses takes indoor games, stage shows, surgical operations, church weddings—\$199.00 for 16mm. cameras. Sent on trial. Dept. f - S. O. S. CINEMA SUPPLY CORPORATION, 602 W. 52nd St., New York 19.

STUDIO & PRODN. EQUIP.

NEW CINEVOICE 16MM. SINGLE SYSTEM SOUND CAMERA, \$695.00; New Single Broads on rolling stands, \$35.30; Twin turret Eyemo, 6 fast lenses, motor, etc., \$1,095.00; Belhowell 16/35 Hot Splicer, worth \$1,000, rebuilt, \$795.00; New Synchronous Tape Recorders, MacVan 16mm. Sound Printers, \$550.00; 35mm. Recorders from \$495.00; New Auricon 33 Minute Camera, \$1,665.00. Send for Catalog Sturelab. Dept. f, S.O.S. CINEMA SUPPLY CORPORATION, 602 W. 52nd Street, New York 19.

ROGER CAMERA TIMER

for automatic operation of (any) camera and light for **TIME-LAPSE CINEMATOGRAPHY** and **ANIMATION** as used by many organizations since 15 years. Microcinema Equipment.

SETTINGS: 1, 2, 3, 6, 12 and 24 Exp. per Hour, 1, 2, 3, 4, 6, and 8 Exp. per minute and faster, also single frame push button.

ROLAB

Sandy Hook, Connecticut

EQUIP. WANTED

WANTED TO BUY FOR CASH

CAMERAS AND ACCESSORIES

MITCHELL, B & H, EYEMO, DEBRIE, AKELEY

ALSO LABORATORY AND CUTTING ROOM
EQUIPMENT

CAMERA EQUIPMENT COMPANY

1600 BROADWAY, NEW YORK CITY 19

CABLE: CINEQUIP

"WANTED"

Mitchell - Akeley - B & H

Wall - Eyemo

Cameras - Lenses - Equipment

NATIONAL CINE EQUIPMENT, INC.

20 West 22nd Street

New York 10, New York

COLLECTORS—want early Still and Movie Cameras, Projectors, all widths film, amateur and professional, Posters, Catalogues, Books, Stills, Letters, Circulars. Will pay cash, or have cameras and others to trade. IRVING BROWNING, 70 West 45th Street, New York.



He gives shape to things to come...



HIS the ability to see each script through the camera's eye ... to picture with brush and pencil the story's dramatic highlights ... and, finally, to shape sketches into settings of authentic merit.

He is the screen's art director, at once responsive and responsible. Not only must he be sensitive to the mood of the story ... giving full consideration, as well, to the personality of the star ... but

also he must be constantly aware of the practicalities of motion picture production, be able to work closely with scores of crafts within and without the studio.

Above all, the art director knows the importance of the faithful reproduction of the values he creates ... an assignment he is well content to see competently handled by Eastman's famous family of motion picture films.

EASTMAN KODAK COMPANY

ROCHESTER 4, N. Y.

J. E. BRULATOUR, INC., DISTRIBUTORS
FORT LEE • CHICAGO • HOLLYWOOD

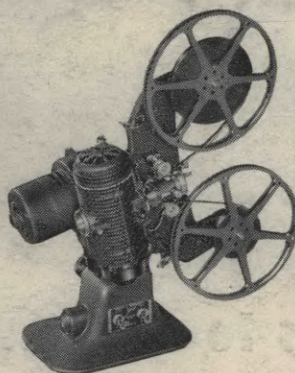
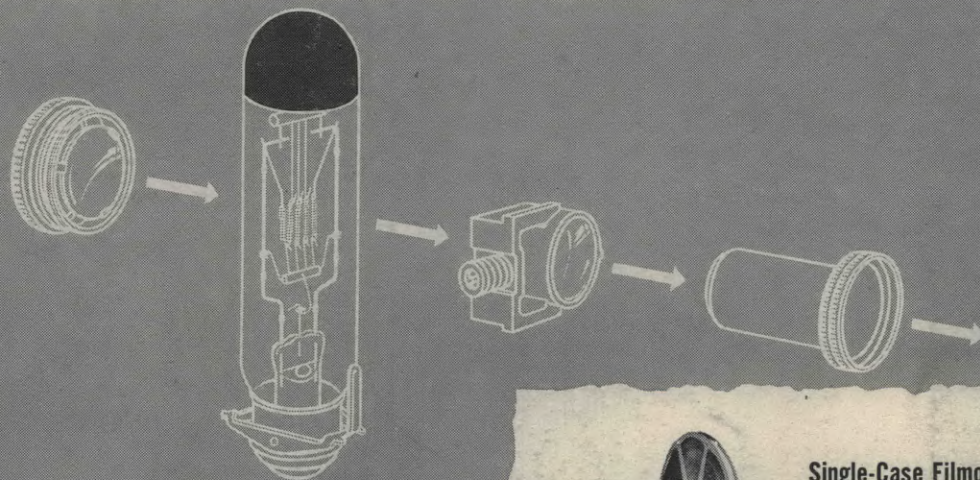
See your movies in a better light ...with Bell & Howell!

Reflector, lamp, condenser and lens are perfectly aligned in Bell & Howell projectors so *all the light output* of the pre-aligned lamp is transmitted to the screen. This means brighter, more evenly lighted pictures.

Bell & Howell's straight-line optical system is specially designed to give you maximum screen illumi-

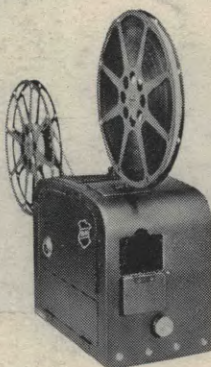
nation...to show your films more clearly, more brilliantly!

With Bell & Howell projectors you also get steady, flicker-free projection...full protection for your film. You've never seen your movies until you've seen them with a Bell & Howell!



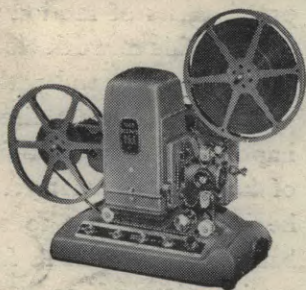
8mm Regent

Better illumination than any other popular make, regardless of lamp wattage. Easy to thread, easy to operate. Built for dependable performance, long life. Only \$149.50.



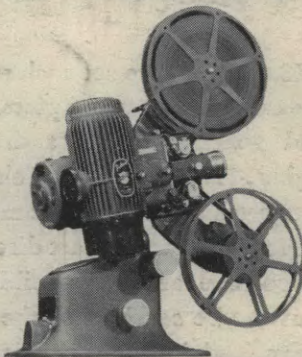
Single-Case Filmosound

For 16mm sound or silent movies. Governor-controlled gear drive assures constant film speed. Natural, flutterless sound. Many other important features. With six-inch built-in speaker, \$399.50. (Larger, separate speakers can be furnished.)



8mm Picture Master

Combines theater-quality projection with ease of operation. Floating film construction prevents film wear. Leads the 8mm field. \$262.00.



16mm Diplomat

Smooth helical gear drive for quiet operation, long life. Two-way focusing mount. Safe-lock sprockets to protect film. \$273.30.

These projectors guaranteed for life! During the life of the product, any defects in workmanship or material will be remedied free (except transportation).

You buy for a lifetime when you buy

Bell & Howell

Chicago 45